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VOLUME XIII

CATALOGUE OF BIRDS OF THE AMERICAS  
AND THE ADJACENT ISLANDS

IN

FIELD MUSEUM OF NATURAL HISTORY

INCLUDING ALL SPECIES AND SUBSPECIES KNOWN TO OCCUR IN NORTH AMERICA,  
MEXICO, CENTRAL AMERICA, SOUTH AMERICA, THE WEST INDIES, AND  
ISLANDS OF THE CARIBBEAN SEA, THE GALAPAGOS ARCHIPELAGO,  
AND OTHER ISLANDS WHICH MAY BE INCLUDED ON  
ACCOUNT OF THEIR FAUNAL AFFINITIES

BY

CHARLES E. HELLMAYR

ASSOCIATE CURATOR OF BIRDS

PART VIII

ALAUDIDAE - HIRUNDINIDAE - MOTACILLIDAE - BOMBYCILLIDAE  
PTILOGONATIDAE - DULIDAE - VIREONIDAE - VIREOLANIIDAE  
CYCLARHIDAE - LANIIDAE - STURNIDAE - COEREVIDAE  
COMPSOTHLYPIDAE

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CHICAGO, U. S. A.

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## PREFACE TO PART VIII

The present installment continues the enumeration of the American Oscines. It contains the list of the recognized species and subspecies of thirteen families, including several important ones, such as the Swallows, Vireos, Honey Creepers, and Wood Warblers. While the majority of the groups treated in this part form well-defined natural units, the delimitation of the Honey Creepers and Wood Warblers presents unusual difficulties. Particularly, the first-named family, as now understood, is a rather heterogeneous assemblage of birds showing wide divergencies in structure as well as in habits. The genus *Diglossa*, for instance, looks very different from the other generic groups classified in the same family. *Ateleodacnis* and *Conirostrum*, on the other hand, bear some remarkable resemblances to certain Wood Warblers, and it is likely that their natural affinities are with the latter family, to which they have tentatively been referred by the late Robert Ridgway and others. The Wood Warbler family also is far from being uniform, and some species of the genus *Basileuterus* strikingly recall certain small tanagers in general aspect and color-pattern. Anatomical researches may ultimately help in determining the systematic position of these birds of disputed relationship.

Style and scope of this part closely follow the standard adopted for the preceding volumes. The author has again attempted to indicate the actual (or in case of loss, the former) location of types, and it is hoped that the results of this time-consuming, frequently unsuccessful investigation may be of some service to ornithologists.

In perusing the list of specimens in Field Museum, it is well to keep in mind that, owing to his absence from Chicago, the author has not been able to examine every specimen himself, and it is requested that any errors of identification or allocation be treated with leniency.

Various museums and individuals have very generously cooperated in the preparation of this volume, either by the loan of material or by supplying information. To the names listed in the preceding parts must be added those of Professor Herman Michel, Director, and Dr. Moriz Sassi, Curator of Birds, in the Museum of Natural History in Vienna, Austria, to whom the author owes a large debt of gratitude for giving him free access to the collections and libraries under their care.

June 30, 1933

C. E. HELLMAYR



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# CATALOGUE OF BIRDS OF THE AMERICAS

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BY CHARLES E. HELLMAYR

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## PART VIII

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Order PASSERIFORMES—Continued

Suborder OSCINES—Continued

Family ALAUDIDAE. Larks

Genus ALAUDA Linnaeus

*Alauda* Linnaeus, Syst. Nat., 10th ed., 1, p. 165, 1758—type, by subs. desig.  
(Swainson, Zool. Journ., 3, p. 344, 1827), *Alauda arvensis* Linnaeus.

### ***Alauda arvensis arvensis* Linnaeus. SKYLARK.**

*Alauda arvensis* Linnaeus, Syst. Nat., 10th ed., 1, p. 165, 1758—"in Europae apricis"; restricted type locality, Sweden.

*Alauda arvensis arvensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 292, 1907 (monog., full bibliog.); Eaton, Bds. New York, 2, p. 201, 1914—Long Island.

*Range*.—Europe (except Mediterranean region) and the British Isles. Accidental in (?) Greenland<sup>1</sup> and Bermuda. Introduced and resident on Vancouver Island, British Columbia; also introduced, but not permanently established at several localities in the United States, although breeding for several years on Long Island, New York.

<sup>1</sup> Whether the Skylark really ever occurred in Greenland is open to doubt. Neither Winge nor Helms nor Schalow know of any definite record, and its inclusion in the Greenlandic fauna appears to rest on Droste's vague statement (Journ. Orn., 17, p. 117, 1869) that two isolated specimens were shot "in America and Greenland." (Cf. Winge, Medd. Grønland, 21, p. 316, 1899.)

Genus **CHIONOPHILOS** Brehm<sup>1</sup>

*Eremophila* (not *Eremophilus* Humboldt, 1811) Brehm, Isis, p. 322, 1828—type, by subs. desig. (Sharpe, Cat. Bds. Brit. Mus., 13, p. 528, 1890), *Alauda alpestris* Linnaeus.

*Phileremos* (not *Phileremus* Latreille, 1809) Brehm, Handb. Naturg. Vög. Deutschl., p. 312, 1831—new name for *Eremophila* Boie.

*Chionophilos* (Petényi MS.) Brehm, Handb. Liebh. Stuben- und Hausvögel, p. 296, 1832—type, by monotypy, *Alauda alpestris* Linnaeus.

*Niphophilos* (Petényi MS.) Brehm, Handb. Liebh. Stuben- und Hausvögel, p. 296, 1832—substitute name for *Chionophilos* Brehm.

*Otocoris*<sup>2</sup> Bonaparte, Nuovi Ann. Sci. Nat. Bologna, 2, p. 407, 1838—type, by monotypy, *Alauda cornuta* Wilson=*Alauda alpestris* Linnaeus.

*Philammus* Gray, List Gen. Bds., p. 47, 1840—type, by orig. desig., *Alauda alpestris* Linnaeus.

**\*Chionophilos alpestris arcticola** (Oberholser). **PALLID HORNED LARK.**

*Otocoris alpestris arcticola* Oberholser, Proc. U. S. Nat. Mus., 24, p. 816, 1902—Fort Reliance, Yukon River, British America (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 307, 1907 (monog., full bibliog.); Brooks and Swarth, Pac. Coast Avifauna, 17, p. 75, 1925—British Columbia.

*Range*.—Breeds in northwestern North America from Alaska (except Pacific coast strip) and in the upper Yukon Valley, south on high mountains through British Columbia to Washington; winters south to Oregon, Utah, and Montana.

3: British Columbia (Okanagan Landing, 2; Sumas, 1).

**\*Chionophilos alpestris enthymius** (Oberholser).<sup>3</sup> **SASKATCHEWAN HORNED LARK.**

*Otocoris alpestris enthymia* Oberholser, Proc. U. S. Nat. Mus., 24, p. 817, 1902—St. Louis, Saskatchewan (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 308, 1907 (monog., bibliog.); Bailey, Bds. New Mex., p. 452, 1928—New Mexico.

*Range*.—Breeds from central Saskatchewan, eastern Montana, Wyoming, and Colorado south to northwestern Texas, central Kansas, central Nebraska, and central North Dakota; winters south to Texas; casually to Utah and Arizona.

<sup>1</sup> Cf. Laubmann, Verh. Orn. Ges. Bay., 15, p. 222, 1922.

<sup>2</sup> Emended variously to *Otocorys*, *Otocoryx*, and *Otocornis*.

<sup>3</sup> Rather a questionable race, not admitted in the new A. O. U. Check List of 1931.

25: Alberta (Whitla, 2); Saskatchewan (Quill Lake, 2); North Dakota (Braddock, 3; Jamestown, 2; Bottineau, 2; Minot, 1; Dickinson, 7); Nebraska (Greenwood, 1; Fort Sidney, 5).

**\*Chionophilos alpestris hoyti (Bishop). HOYT'S HORNED LARK.**

*Otocoris alpestris hoyti* Bishop, Auk, 13, p. 130, 1896—Cando, Towner County, North Dakota (type in Bishop Collection); Oberholser, Proc. U. S. Nat. Mus., 24, p. 812, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 306, 1907 (monog., full bibliog.); Saunders, Pac. Coast Avifauna, 14, p. 94, 1921—Montana; Brooks and Swarth, l.c., 17, p. 77, 1925—British Columbia.

*Otocorys alpestris leucolaema* (not *Eremophila alpestris b. leucolaema* Coues) Henshaw, Auk, 1, p. 258, 1884—part, "interior of British America."

*Otocoris alpestris leucolaema* Dwight, Auk, 7, p. 142, 1890—part, Alaska and western British America, in winter into western United States to about latitude 40°.

*Range*.—Breeds in middle northern Canada, north to Boothia Peninsula, west to the Mackenzie Valley, east to Hudson Bay, south to northern Alberta and Manitoba; winters south to Nevada, Utah, Kansas, Michigan, Ohio, New York, and Connecticut.

1: Wyoming (Fort Washakie, 1).

**\*Chionophilos alpestris alpestris (Linnaeus). NORTHERN HORNED LARK.**

*Alauda alpestris* Linnaeus, Syst. Nat., 10th ed., 1, p. 166, 1758—based on "The Lark" Catesby, Nat. Hist. Carolina, 1, p. 32, pl. 32; Virginia and Carolina (in winter).

*Alauda cornuta* Wilson, Amer. Orn., 1, p. 87 (in text), pl. 5, fig. 4, 1808—new name for *Alauda alpestris* Linnaeus.

*Otocorys alpestris* Henshaw, Auk, 1, pp. 257, 263, 1884 (monog.); Dwight, Auk, 7, p. 141, 1890.

*Otocoris alpestris alpestris* Oberholser, Proc. U. S. Nat. Mus., 24, p. 807, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 303, 1907—(monog., full bibliog.).

*Range*.—Breeds in northeastern North America, east of Hudson Bay and south to head of James Bay, Labrador, southeastern Quebec (Gaspé), and Newfoundland; winters south to the Ohio Valley and Georgia, west to Manitoba; casual in Louisiana and Bermuda; accidental in Greenland.

42: Labrador (Indian Harbor, 4; Battle Harbor, 3); Quebec (Bryon Island, Magdalen Islands, 1); Maine (New Vineyard, 1); Massachusetts (Wellington, 1; Somerville, 1; Scituate, 1; Chatham

Island, 1; Great Island, 6); Connecticut (Lyme, 2; Stratford, 1); New York (Shelter Island, 9; Suffolk County, 3; Brockport, 1); Illinois (Chicago, 3); Wisconsin (Beaver Dam, 4).

**\*Chionophilos alpestris leucolaema** (Coues). DESERT HORNED LARK.

*Eremophila alpestris* var. *leucolaema* Coues, Birds Northwest, p. 38, 1874—Fort Randall, South Dakota (type in U. S. National Museum).

*Otocorys alpestris arenicola* Henshaw, Auk, 1, pp. 259, 265, 1884 (no type specimen or type locality specified; type from Denver, Colorado, in U. S. National Museum).<sup>1</sup>

*Otocoris alpestris arenicola* Dwight, Auk, 7, p. 142, 1890 (monog.).

*Otocoris alpestris leucolaema* Oberholser, Proc. U. S. Nat. Mus., 24, p. 820, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 309, 1907 (monog., full bibliog.); Saunders, Pac. Coast Avifauna, 14, p. 91, 1921—Montana; Grinnell, l.c., 11, p. 95, 1911—California; idem, Univ. Calif. Pub. Zool., 32, p. 144, 1928—Lower California; Bailey, Bds. New Mex., p. 448, 1928—New Mexico.

**Range.**—Breeds in the interior of the western United States, north to southern Alberta, west to western Montana and Nevada, south to Utah, southern Colorado, eastern and central-southern New Mexico, and central-western Texas, east to central-northern Texas, central Colorado, Wyoming, and Montana; winters south to south-eastern California, extreme northern Lower California, Sonora, Chihuahua, and southern Texas.

23: Wyoming (Hat Creek, 3); Colorado (Loveland, 1; Fort Lyon, 3; Fraser, 3; Rocky Ford, 3; Larimer County, 2; Colorado Springs, 1; Fort Morgan, 1; Morgan County, 1; Fort Collins, 1; Mount Flora, 2); New Mexico (Mesilla, 1; Fort Union, 1).

**\*Chionophilos alpestris praticola** (Henshaw). PRAIRIE HORNED LARK.

*Otocorys alpestris praticola* Henshaw, Auk, 1, p. 264, 1884—Mount Carmel and Richland County, Illinois, and Gainesville, Texas (type from Richland County, Illinois, in U. S. National Museum).

*Otocoris alpestris praticola* Dwight, Auk, 7, p. 144, 1890 (monog.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 825, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 311, 1907 (monog., full bibliog.).

**Range.**—Breeds in the northeastern United States and south-eastern Canada, from southwestern Quebec and southern Manitoba

<sup>1</sup> Cf. Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 311 (footnote), 1907.

to eastern Kansas, central Missouri, Ohio, West Virginia, Maryland, and Connecticut; winters south to Texas, Tennessee, Georgia, and Florida, casually to Arizona and Colorado.

44: Connecticut (New Haven, 1); New York (Sennett, 1; Onaco, 1; Brockport, 1); Ohio (Garrettsville, 1); Indiana (Bluffton, 1; Tracy Station, 1); Illinois (Chicago, 4; Laverne, 2; Clearing, 1; Turner Park, 1; Beach, 1; Waukegan, 2; Lewistown, 1; Stickney, 1); Iowa (Knoxville, 1); Michigan (Ann Arbor, 1); Wisconsin (Beaver Dam, 16); Minnesota (Tintah, 1; Minneapolis, 1; Pipestown County, 1); North Dakota (Bismarck, 1); Nebraska (Gresham, 1); Texas (Dallas, 1).

**\*Chionophilos alpestris giraudi (Henshaw). TEXAS HORNED LARK.**

*Otocorys alpestris giraudi* Henshaw, Auk, 1, p. 266, 1884—Corpus Christi, Texas (type in U. S. National Museum).

*Otocoris alpestris giraudi* Dwight, Auk, 7, p. 145, 1890 (monog.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 831, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 314, 1907 (monog., full bibliog.); Phillips, Auk, 28, p. 79, 1911—Matamoros, Tamaulipas; Griscom and Crosby, Auk, 43, p. 22, 1926—coastal prairie of Brownsville region, Texas.

*Range*.—Permanent resident in the coastal prairie region of extreme southeastern Texas (Galveston Bay) south to extreme north-eastern Tamaulipas, Mexico.

33: Texas (Corpus Christi, 27; Brownsville, 3; Port O'Connor, 2; San Pedro County, 1).

**Chionophilos alpestris strigatus (Henshaw). STREAKED HORNED LARK.**

*Otocorys alpestris strigata* Henshaw, Auk, 1, p. 267, 1881—Fort Steilacoom, Puget Sound, Washington, and Yuba County, California (type from Fort Steilacoom in U. S. National Museum).

*Otocoris alpestris strigata* Dwight, Auk, 7, p. 151, 1890 (monog.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 837, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 316, 1907 (monog., full bibliog.); Grinnell, Pac. Coast Avifauna, 11, p. 94, 1915—California localities; Jewett and Gabrielson, I.c., 19, p. 28, 1929; Burleigh, Auk, 46, p. 515, 1929.

*Range*.—Breeds in the Pacific coast belt of Washington and Oregon west of the Cascade Mountains, south to Siskiyou County, California; winters in eastern Washington and Oregon south to northern California.

**\*Chionophilos alpestris merrilli** (Dwight). DUSKY HORNED LARK.

*Otocoris alpestris merrilli* Dwight, Auk, 7, p. 153, 1890—Fort Klamath, Oregon (type in Brewster Coll., now in Museum of Comparative Zoology, Cambridge, Mass.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 833, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 315, 1907 (monog., full bibliog.); Grinnell, Pac. Coast Avifauna, 11, p. 95, 1915—California localities; Saunders, l.c., 14, p. 93, 1921—Montana; Brooks and Swarth, l.c., 17, p. 76, 1925—British Columbia; Grinnell, Univ. Calif. Pub. Zool., 35, p. 285, 1930 (crit.).

*Otocoris alpestris sierrae* Oberholser, Condor, 22, p. 34, 1920—head of Pine Creek, Lassen County, California (type in U. S. National Museum).

*Range*.—Breeds from southern British Columbia and northwestern Idaho to northeastern California, east of the Cascades and in northwestern Nevada; winters south to central California.<sup>1</sup>

9: British Columbia (Okanagan Landing, 2); Washington (Pullman, 1; Kiana, 1; Prescott, 1); Oregon (Portland, 1; Enterprise, 1; Eagle Point, 1; Medford, 1).

**\*Chionophilos alpestris insularis** (Dwight). ISLAND HORNED LARK.

[*Otocoris alpestris*] *insularis* (Townsend MS.) Dwight, Auk, 7, p. 152 (in text), April, 1890—"Santa Cruz group of islands," California (the type in the U. S. National Museum is from San Clemente Island); Townsend, Proc. U. S. Nat. Mus., 13, p. 140, Sept., 1890—San Clemente Island.

*Otocoris alpestris insularis* Oberholser, Proc. U. S. Nat. Mus., 24, p. 839, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 317, 1907 (monog., full bibliog.); Grinnell, Pac. Coast Avifauna, 11, p. 95, 1915; Howell, l.c., 12, p. 67, 1917—California coastal islands.

*Chionophilos alpestris insularis* Underdown, Auk, 48, p. 441, 1931 (crit.).

*Range*.—Resident on the Santa Barbara Islands, California; in winter on the adjacent mainland.

15: California (San Clemente Island, 12; Santa Cruz Island, 3).

**\*Chionophilos alpestris actius** (Oberholser). CALIFORNIA HORNED LARK.

*Otocoris alpestris actia* Oberholser, Proc. U. S. Nat. Mus., 24, p. 845, 1902—Jacumba, San Diego County, California (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 320, 1907 (monog., full bibliog.); Grinnell, Pac. Coast Avifauna, 11, p. 94, 1915; idem, Univ. Calif. Pub. Zool., 32, p. 143, 1928—Lower California (distribution).

<sup>1</sup> Another form, nearly allied to *C. a. merrilli*, has lately been separated by Oberholser as *O. a. lamprochroma* (Sci. Pub. Cleveland Mus. Nat. Hist., 4, p. 4, 1932; type from Warner Valley, Oregon).

*Otocorys alpestris rubeus* Henshaw, Auk, 1, pp. 263, 267, 1884—part, Santa Rosalia Bay, Lower California.

**Range.**—Resident in middle and western California, from San Francisco south to northern Lower California, east to the San Joaquin Valley.

28: California (San Pedro, 4; San Diego, 2; Monterey, 4; Milton, 1; Sonoma, 1; San Bruno, 5; Santa Cruz, 2; Port Ballona, 1; Big Bear Valley, 2; Nicasio, 2; Los Baños, 1; Los Angeles County, 1); Lower California (San Pedro Mártir, 1; San Fernando, 1).

***Chionophilos alpestris enerterus* (Oberholser).<sup>1</sup> MAGDALENA HORNED LARK.**

*Otocoris alpestris enertera* Oberholser, Proc. Biol. Soc. Wash., 20, p. 41, 1907—Llano de Yrais (near Magdalena Bay), Lower California (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 890, 1907—central Lower California; Grinnell, Univ. Calif. Pub. Zool., 32, p. 144, 1928—Lower California.

*Otocorys alpestris chrysolaema* (not *Alauda chrysolaema* Wagler) Belding, Proc. U. S. Nat. Mus., 5, "1882," p. 530, 1883—Santa Rosalia Bay, Lower California.

*Otocoris alpestris pallida* Dwight, Auk, 7, p. 154, 1890—part, Magdalena and Santa Margarita Islands.

*Otocoris alpestris actia* (not of Oberholser) Townsend, Bull. Amer. Mus. N. H., 48, p. 17, 1923—San Bartolomé Bay; Oberholser, Proc. U. S. Nat. Mus., 24, p. 845, 1902—part, Santa Rosalia Bay; Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 320, 1907—part, northern Lower California.

**Range.**—Resident locally from Santa Rosalia Bay south to Magdalena Bay, Lower California.

**\**Chionophilos alpestris rubeus* (Henshaw).<sup>2</sup> RUDDY HORNED LARK.**

*Otocorys alpestris rubeus* Henshaw, Auk, 1, pp. 260, 267, 1884—Stockton, California (type in U. S. National Museum).

*Otocoris alpestris rubea* Dwight, Auk, 7, p. 150, 1890 (monog.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 851, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 322 (monog., full bibliog.); Grinnell, Pac. Coast Avifauna, 11, p. 94, 1915.

<sup>1</sup> *Chionophilos alpestris enerterus* (Oberholser): "Similar to *C. a. ammophilus*, but smaller; the upper parts paler and more grayish; the cinnamonaceous of nape, upper tail coverts, and bend of wing more pinkish." (Oberholser, l.c.).

<sup>2</sup> As pointed out by Neumann (Journ. Orn., 75, pp. 374–376, 1927), it is not at all unlikely that the unique specimen of *Otocoris berlepschi* Hartert (Journ. Orn., 38, p. 103, 1890; Ibis, 1892, p. 522, pl. 13), said to be from "Caffraria," might prove to be a melanistic mutant of *C. a. rubeus*.



*Range*.—Sacramento Valley in central-northern California.

3: California (Marysville, 1; Nicasio, 1; Calaveras County, 1).

**\*Chionophilos alpestris occidentalis (McCall). MONTEZUMA HORNED LARK.**

*Otocoris occidentalis* McCall, Proc. Acad. Nat. Sci. Phila., 5, p. 218, 1851—near Santa Fé, New Mexico (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 21).

*Otocoris alpestris occidentalis* Oberholser, Proc. U. S. Nat. Mus., 24, p. 855, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 324, 1907 (monog., full bibliog.); Swarth, Pac. Coast Avifauna, 10, p. 44, 1914—Arizona; idem, Proc. Calif. Acad. Sci., (4), 18, p. 312, 1929—Arizona; Bailey, Bds. New Mex., p. 452, 1928—New Mexico (distribution).

*Range*.—Breeds from central Arizona to central New Mexico; winters south into western Texas and Chihuahua.

28: Arizona (Phoenix, 9); New Mexico (Deming, 10); Chihuahua (Bastillos, 8; Chihuahua, 1).

**\*Chionophilos alpestris adustus (Dwight). SCORCHED HORNED LARK.**

*Otocoris alpestris adusta* Dwight, Auk, 7, p. 148, 1890—Camp Huachuca, southern Arizona (type in Museum of Comparative Zoology, Cambridge, Mass.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 858, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 325 (monog., full bibliog.); Swarth, Pac. Coast Avifauna, 10, p. 44, 1914—Arizona; idem, Proc. Calif. Acad. Sci., (4), 18, p. 311, 1929—Arizona; Oberholser, Sci. Pub. Cleveland Mus. Nat. Hist., 1, p. 92, 1930—Huachuca Mountains, Arizona; van Rossem, Trans. San Diego Soc. N. H., 6, p. 266, 1931—fifteen miles northwest of Nogales, Sonora.

*Range*.—Breeds in central-southern Arizona (on the plains and in the foothills of the Huachuca and Santa Rita Mountains); winters south to Sonora and Chihuahua.

20: Arizona (Huachuca Plains, 16; Fort Huachuca, 1; Bonita Canyon, 2; Santa Cruz County, 1).

**\*Chionophilos alpestris ammophilus (Oberholser). MOHAVE HORNED LARK.**

*Otocoris alpestris ammophila* Oberholser, Proc. U. S. Nat. Mus., 24, p. 849, 1902—Coso Valley, southeastern California (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 321, 1907 (monog.); Grinnell, Pac. Coast Avifauna, 11, p. 95, 1915.

*Otocoris alpestris arenicola* (not of Henshaw) Fisher, N. Amer. Fauna, 7, p. 66, 1893—part, Coso Valley, Mohave Desert, and Darwin, southeastern California.

*Otocoris alpestris chrysolaema* (not *Alauda chrysolaema* Wagler) Fisher, N. Amer. Fauna, 7, p. 67, 1893—part, Panamint Mountains, southeastern California.

**Range.**—Breeds in southeastern California from Owens Valley south to the Mohave Desert; winters south to the Mexican border.

2: California (Santa Isabel, San Diego County, 2).

**Chionophilos alpestris leucansiptilus** (Oberholser). BLEACHED HORNED LARK.

*Otocoris alpestris leucansiptila* Oberholser, Proc. U. S. Nat. Mus., 24, p. 864, 1902—Yuma, Arizona (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 327, 1907 (monog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 144, 1928—Lower California.

**Range.**—Extreme southern Nevada south along the Colorado River in western Arizona and eastern California to northeastern Lower California.

**Chionophilos alpestris dwighti** Stresemann.<sup>1</sup> SONORAN HORNED LARK.

*Otocoris alpestris pallida* (Townsend MS.) Dwight, Auk, 7, p. 154, 1890—near mouth of Colorado River, Sonora (type in U. S. National Museum); Oberholser, Proc. U. S. Nat. Mus., 24, p. 863, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 326, 1907 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 146, 1928 (crit.).

*Chionophilos alpestris dwighti* Stresemann, Orn. Monatsb., 30, p. 88, 1922—new name for *O. a. pallida* Dwight, preoccupied.<sup>2</sup>

**Range.**—Resident in coastal district of the Gulf of California in northwestern Sonora.

**\*Chionophilos alpestris aphrastus** (Oberholser). CHIHUAHUA HORNED LARK.

*Otocoris alpestris aphrasta* Oberholser, Proc. U. S. Nat. Mus., 24, p. 860, 1902—Casas Grandes, Chihuahua, Mexico (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 326, 1907 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 168, 1906—northwestern Durango; Bailey, Bds. New Mex., p. 452, 1928.

**Range.**—Resident in extreme southeastern Arizona, southwestern New Mexico, and southeast through Chihuahua to Durango and Coahuila.

<sup>1</sup> *Chionophilos alpestris dwighti* Stresemann: "Similar to *O. a. aphrastus*, but paler above, the nape less pinkish, the back less dusky." (Oberholser, l.c.). Grinnell (l.c., p. 146), however, considers its distinctness from *C. a. leucansiptilus* as extremely doubtful.

<sup>2</sup> *Otocoris alpestris pallida* Dwight is rendered untenable by *Phileremos pallidus* Brehm (Isis, 1842, p. 504—mountains of Siberia), which refers to one of the Asiatic races of the Horned Lark.

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3: Arizona (forty miles southeast of Tucson, 1; Ramsay Canyon, 1; Wilcox, 1).

**Chionophilos alpestris diaphorus** (Oberholser). TAMAULIPAS  
HORNED LARK.

*Otocoris alpestris diaphora* Oberholser, Proc. U. S. Nat. Mus., 24, p. 829, 1902—Miquihuana, Tamaulipas (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 313, 1907 (monog., full bibliog.).

*Range*.—Eastern Mexico, in southern Tamaulipas and Hidalgo; in winter to Oaxaca.

**\*Chionophilos alpestris chrysolaema** (Wagler). MEXICAN  
HORNED LARK.

*Alauda chrysolaema* Wagler, Isis, 1831, p. 530—Mexico (type in Munich Museum).

*Alauda minor* (not of Gmelin) Giraud, Sixteen Species N. Amer. Bds., p. 33, 1841—"Texas" (type in U. S. National Museum).

*Otocorys alpestris chrysolaema* Henshaw, Auk, 1, p. 260, 1884 (monog.).

*Otocoris alpestris chrysolaema* Dwight, Auk, 7, p. 149, 1890—part (monog.); Oberholser, Proc. U. S. Nat. Mus., 24, p. 842, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 319, 1907 (monog., full bibliog.).

*Range*.—Resident in the southern portion of the Mexican plateau, in states of Vera Cruz, Puebla, Mexico, Tlaxcala, Zacatecas, Guana-juato, and eastern Jalisco.

1: Jalisco (Tuxpan, 1).

**Chionophilos alpestris oaxacae** (Nelson). OAXACA HORNED  
LARK.

*Otocoris alpestris oaxacae* Nelson, Auk, 14, p. 54, 1897—San Mateo del Mar, Oaxaca (type in U. S. National Museum); Oberholser, Proc. U. S. Nat. Mus., 24, p. 854, 1902 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 323, 1907 (monog., full bibliog.).

*Eremophila alpestris oaxacae* Bangs and Peters, Bull. Mus. Comp. Zool., 68, p. 401, 1928—Chivelá, Oaxaca.

*Otocorys chrysolaema* (not *Alauda chrysolaema* Wagler) Sclater, Proc. Zool. Soc. Lond., 27, p. 372, 1859—Oaxaca, Mexico (crit.).

*Otocoris alpestris pallida* Dwight, Auk, 7, p. 154, 1890—part, Tehuantepec, Oaxaca (crit.).

*Range*.—Resident in southern Oaxaca, Mexico.

**\*Chionophilos alpestris peregrinus (Sclater).<sup>1</sup> BOGOTÁ HORNED LARK.**

*Otocorys peregrina* Sclater, Proc. Zool. Soc. Lond., 23, p. 110, 1855—Bogotá (type in British Museum).

*Otocoris chrysolaemos* (not *Alauda chrysolaema* Wagler) Bonaparte, Atti Sesta Riun. Sci. Ital., p. 405, 1845—Bogotá.

*Otocoris alpestris chrysolaema* Dwight, Auk, 7, p. 149, 1890—part, Bogotá.

*Otocoris alpestris peregrina* Oberholser, Proc. U. S. Nat. Mus., 24, p. 841, 1902—vicinity of Bogotá (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 300 (footnote), 1907—highlands of Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 554, 1917—Bogotá savannah, La Mar, La Holanda, and El Carmen, Colombia.

**Range.**—Resident in the savannah of Bogotá, Colombia.

**3:** Colombia ("Bogotá," 1; El Carmen, 1; La Mar, 1).

**Family HIRUNDINIDAE. Swallows**

**Genus PROGNE Boie**

*Progne* Boie, Isis, 1826, col. 971—type, by virtual monotypy, *Hirundo purpurea* Linnaeus = *Hirundo subis* Linnaeus.

*Progne* Des Murs, in Chenu, Encycl. Hist. Nat., Ois., 2, p. 229, 1852—emendation.

**\*Progne subis subis (Linnaeus).<sup>2</sup> PURPLE MARTIN.**

*Hirundo subis* Linnaeus, Syst. Nat., 10th ed., 1, p. 192, 1758—based on "The Great American Martin" Edwards, Nat. Hist. Bds., 3, p. 120, pl. 120; Hudson's Bay.

*Hirundo purpurea* Linnaeus, Syst. Nat., 12th ed., 1, p. 344, 1766—based on "Purple Martin" Catesby, Nat. Hist. Carolina, 1, p. 51, pl. 51; Virginia and Carolina.

*Hirundo violacea* Gmelin, Syst. Nat., 1, (2), p. 1026, 1789—based on "Hirondelle de la Louisiane" Daubenton, Pl. Enl., pl. 722; Louisiana.

*Hirundo caerulea* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, p. 57, pls. 26, 27, 1807—new name for *Hirundo subis* Linnaeus, *H. purpurea* Linnaeus, and *H. violacea* Gmelin.

*Hirundo versicolor* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 509, 1817—new name for *Hirundo subis* Linnaeus, *H. violacea* Gmelin, and *H. caerulea* Vieillot.

*Progne subis floridana* Mearns, Proc. U. S. Nat. Mus., 24, p. 918, 1902—Lake Kissimmee, Florida (type in U. S. National Museum).

<sup>1</sup> *Chionophilos alpestris peregrinus* (Sclater): Most closely resembling *C. a. insularis*, but much smaller; throat paler yellow; bend of wing slightly brighter rufescent.

<sup>2</sup> *Hirundo ludoviciana* Cuvier (Règne Anim., 1, p. 374, "1817" [=Dec. 7, 1816]), based on "Martinet, de la Louisiane" Daubenton, Pl. Enl., pl. 725, fig. 1, and "Purple Martin" Catesby, Nat. Hist. Carolina, 1, p. 51, refers only in part to the present species, since the bird figured by Daubenton is unquestionably a swift.

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*Progne subis* Baird, Rev. Amer. Bds., 1, p. 274, 1865—North America (monog.; excl. Cape San Lucas); Berlepsch and Hartert, Nov. Zool., 9, p. 14, 1902—Suapuré, Caura River, Venezuela (March, April); Sneath, Bol. Mus. Goeldi, 8, p. 471, 1914—Cussary and Rio Jamundá (Faro), Brazil; Chubb, Bds. Brit. Guiana, 2, p. 330, 1921—upper Takutu Mountains, Ituribisci, and Supenaam.

*Progne subis subis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 31, 1904 (monog.); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 159, 1916—Suapuré, Venezuela; Grinnell, Condor, 30, p. 122, 1928 (crit., range).

*Progne purpurea* Pelzeln, Orn. Bras., 1, p. 16, 1868—Barra do Rio Negro [= Manáos] and Manaqueri, Rio Solimões, Brazil (Dec., Jan., Feb.; spec. in Vienna Museum examined); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 223, 1883—part (excl. Bolivian and Argentine records); Sharpe, Cat. Bds. Brit. Mus., 10, p. 173, 1885—part (excl. Cuba and Cape San Lucas); Sharpe and Wyatt, Monog. Hirund., 2, p. 439, pl. 87, 1893 (monog., excl. Cuba); Ihering, Rev. Mus. Paul., 5, "1901," p. 264, 1902—Iguapé, São Paulo; idem, Cat. Faun. Braz., 1, p. 340, 1907—Bahia (range); Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 77, 1910—Joazeiro, Bahia, Brazil (spec. examined).

*Progne subis hesperia* (not of Brewster) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 35, 1904—part, Pacific coast district of North America from Mexican boundary to Vancouver Island.

*Range*.—North America from Alberta, Saskatchewan, southern Manitoba, northwestern Ontario, New Brunswick, and Nova Scotia west to Vancouver Island, British Columbia, Alaska (Cape Prince of Wales), and south to the Mexican boundary, the Gulf coast, Florida, and (very doubtfully) to eastern Mexico;<sup>1</sup> migrating through Central America (very few, if any authentic records), Venezuela (Suapuré, Caura Valley), and British Guiana (Takutu Mountains, Ituribisci, Supenaam); wintering in northern and eastern Brazil (Manaqueri, Rio Solimões; Manáos; Cussary, opposite Montalegre, lower Amazon; Rio Jamundá, Faro; Joazeiro, Rio São Francisco, Bahia; Iguapé, São Paulo).<sup>2</sup>

<sup>1</sup> In the absence of specimens from Mexico I am unable to make out whether the purple martins reported to breed in the "alpine region of Vera Cruz" (*P. subis* Sumichrast, Mem. Bost. Soc. N. H., 1, p. 547, 1869), in Guadalajara and Tepic (*P. subis* Lawrence, l.c., 2, p. 271, 1874) are really referable to the present form. It will be noted that Ridgway had only three breeding females from Guanajuato, which admittedly were badly soiled with fatty exudation of the skin. Breeding birds from Durango and Sonora have since proved to pertain to *P. s. hesperia*, a circumstance that casts serious doubts on the identification of the purple martins of southern Mexico. More information is urgently desired, the problem being furthermore complicated by the occurrence in Sinaloa of a white-bellied form (*sinaloae*).

<sup>2</sup> Females taken in winter in northern Brazil agree fully with others from the eastern United States.

*Material examined*.—Brazil: Manaqueri, Rio Solimões, 2; Manáos, 5; Joazeiro, Bahia, 3.

38: Connecticut (East Hartford, 1; Hadeyme, 1); Massachusetts (Denbay, 1); Wisconsin (Beaver Dam, 11); Illinois (Chicago, 2; Joliet, 1; Highland Park, 1; Deerfield, 1); Florida (Key West, 2; Gainesville, 1; New River, 1; Kissimmee River, 1); Texas (Corpus Christi, 2); California (Santa Isabel, 1; Riverside, 1; Paicines, San Benito County, 1); Mexico (Babicora, Chihuahua, 8; Cozumel Island, Yucatan, 1).

**\*Progne subis hesperia Brewster. WESTERN MARTIN.**

*Progne subis hesperia* Brewster, Auk, 6, p. 92, 1889—Sierra de la Laguna, Lower California (types in collection of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 291, 1930); Richmond, Proc. U. S. Nat. Mus., 16, p. 485, 1893—Rio Escondido, Nicaragua (Sept. 13); Anthony, Zoe, 4, p. 243, 1893—San Pedro Mártir Mountains, Lower California; idem, Auk, 12, p. 141, 1895—San Fernando, Lower California; Brewster, Bull. Mus. Comp. Zool., 41, p. 164, 1902—Lower California (habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 35, 1904—part, Lower California; Miller, Bull. Amer. Mus. N. H., 22, p. 177, 1906—Arroyo del Buey, Durango (May 29; crit., range); Grinnell, Condor, 30, pp. 122, 124, 1928—Lower California (crit., range); idem, Univ. Calif. Pub. Zool., 32, p. 188, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 269, 1931—Saric, Tóbari Bay, El Alamo, and Tiburón Island, Sonora, and Tucson, Arizona (crit.).

*Progne hesperia* Sharpe and Wyatt, Monog. Hirund., 2, p. 455, pl. 88, 1893—part, Lower California.

*Progne purpurea* (not *Hirundo purpurea* Linnaeus) Sharpe, Cat. Bds. Brit. Mus., 10, p. 173, 1885—part, Lower California.

**Range.**—Lower California and adjoining parts of Arizona (Tucson) and Sonora, possibly extending into western Texas (Fort Davis);<sup>1</sup> on migration in Nicaragua (Rio Frio; Sept. 13); winter home unknown.

2: Lower California (San Basilio, 1; San José del Cabo, 1).

**\*Progne subis cryptoleuca Baird.<sup>2</sup> CUBAN MARTIN.**

<sup>1</sup> The range of *P. s. hesperia* has yet to be determined. Grinnell restricts it to Lower California, and refers Arizona birds to typical *subis*, although a slight tendency to the characters of *hesperia* is admitted. Miller, on the other hand, unhesitatingly calls them *hesperia*, with which he also places a single breeding female from Fort Davis in western Texas. Van Rossem identifies a series of supposedly breeding birds from Tucson as *hesperia*, but claims that four others from the Chiricahua Mountains "are good *subis*." Specimens from Babicora, Chihuahua, I cannot separate from *subis*. Though the females, by their slightly whiter belly, vary in the direction of *hesperia*, these birds are among the largest I have seen, the length of their wings measuring fully 150 mm. or more.

<sup>2</sup> *Progne subis cryptoleuca* Baird is so decidedly intermediate between *P. s. subis* and *P. s. dominicensis* that I do not hesitate to unite the Caribbean Martin in the same specific group. Cuban females cannot be told by any character from those of *dominicensis*, while five males, by the varying amount of white below, form a nearly unbroken chain between the two "species."

**Material examined.**—Cuba, 8.

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*Progne cryptoleuca* Baird, Rev. Amer. Bds., 1, p. 277, May, 1865—Cuba and Cape Florida, Florida (type from Remedios, Cuba, in U. S. National Museum); Gundlach, Journ. Orn., 20, p. 431, 1872—Cuba (habits, nest, and eggs); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 37, 1904—Cuba, accidental in Florida (monog., bibliog.); Bangs and Zappey, Amer. Natur., 39, p. 209, 1905—Manigua, Isle of Pines; Todd, Ann. Carnegie Mus., 10, p. 260, 1916—Los Indios, Isle of Pines; Barbour, Mem. Nutt. Orn. Cl., 6, p. 109, 1923—Cuba.

*Hirundo purpurea* (not of Linnaeus) d'Orbigny, in Sagra, Hist. Cuba, Ornith., p. 94, 1840—part, Cuba.

*Progne purpurea* Gundlach and Cabanis, Journ. Orn., 4, p. 3, 1856—Cuba; Gundlach, l.c., 9, p. 328, 1861—Cuba; Brewer, Proc. Bost. Soc. N. H., 7, p. 306, 1860—Cuba; (?) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 223, 1883—part, Belize, British Honduras (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 173, 632, 1885—part, Cuba, and (?) spec. b', British Honduras; Sharpe and Wyatt, Monog. Hirund., 2, p. 439, 1893—part, Cuba and (?) British Honduras.

*Progne subis* (not *Hirundo subis* Linnaeus) Cory, Auk, 3, p. 56, 1886—Cuba; idem, Bds. W. Ind., p. 70, 1889—Cuba.

*Progne dominicensis* (not *Hirundo dominicensis* Gmelin) Cory, Auk, 8, p. 294, 1891—Cuba (seen).

**Range.**—Island of Cuba, including the Isle of Pines, Greater Antilles; occasional in southern Florida (Cape Florida, May 18, 1858; Key West, May 9, 1895; Clearwater, date not recorded); (?) British Honduras (Belize).

3: Cuba (unspecified, 2); Florida (Key West, 1).

### \**Progne subis dominicensis* (Gmelin). CARIBBEAN MARTIN.

*Hirundo dominicensis* Gmelin, Syst. Nat., 1, (2), p. 1025, 1789—based on "*Hirundo dominicensis*" Brisson, Orn., 2, p. 493, and "*Hirondelle d'Amérique*" Daubenton, Pl. Enl., pl. 545, fig. 1, Santo Domingo; Vieillot, Hist. Nat. Ois. Amér. Sept., 1, p. 59, pls. 28, 29, 1807—Porto Rico and Santo Domingo; Bryant, Proc. Bost. Soc. N. H., 10, p. 252, 1866—Porto Rico; idem, l.c., 11, p. 94, 1867—Dominican Republic.

*Hirundo albiventris* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 533, 1817—new name for *Hirundo dominicensis* Gmelin.

*Progne dominicensis* Jardine, Ann. Mag. Nat. Hist., 18, p. 120, 1846—Tobago (breeding); Gosse, Bds. Jamaica, p. 69, 1847—Jamaica (habits); Sallé, Proc. Zool. Soc. Lond., 25, p. 232, 1857—Santo Domingo; Sclater, Cat. Coll. Amer. Bds., p. 38, 1862—part, spec. b, Jamaica; March, Proc. Acad. Nat. Sci. Phila., 1863, p. 295—Jamaica (habits, nest, and eggs); Taylor, Ibis, 1864, p. 166—Porto Rico; Baird, Rev. Amer. Bds., 1, p. 279, 1865—Jamaica (Spanishtown) and Porto Rico (crit.); Sclater, Proc. Zool. Soc. Lond., 1876, p. 14—Santa Lucia; Gundlach, Journ. Orn., 26, p. 172, 1878—Porto Rico (eggs); idem, Anal. Soc. Esp. Hist. Nat., 7, p. 196, 1878—Porto Rico (habits); Lawrence, Proc. U. S. Nat. Mus., 1, pp. 56, 190, 269, 1878—Dominica, St. Vincent, and Grenada; idem, l.c., 1, p.

354, 1879—Martinique; Allen, Bull. Nutt. Orn. Cl., 5, p. 166, 1880—Santa Lucia; Lister, Ibis, 1880, p. 40—St. Vincent; Cory, Bds. Haiti and San Dom., p. 44, [pl. 21], fig. 2, 1885—Samaná, Santo Domingo; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 176, 633, 1885 (monog.); Cory, Auk, 3, p. 56, 1886—Santo Domingo and Antilles (descr.); Wells, Proc. U. S. Nat. Mus., 9, p. 612, 1887—Grenada (habits); Sharpe and Wyatt, Monog. Hirund., 2, p. 465, pl. 91, 1889 (monog.); Feilden, Ibis, 1889, p. 483—Barbados; Cory, Bds. W. Ind., p. 70, 1889—Santo Domingo and Antilles; idem, Auk, 8, pp. 47, 48, 1891—St. Eustatius and St. Kitts; Verrill, Trans. Conn. Acad., 8, p. 340, 1892—Dominica; Scott, Auk, 10, p. 181, 1893—Priestman's River, Jamaica; Cory, Auk, 10, p. 220, 1893—Tobago; Field, Auk, 11, p. 127, 1894—Port Henderson, Jamaica; Wells, Auk, 19, p. 347, 1902—Carriacou; Bowdish, Auk, 20, p. 15, 1903—Mona, Porto Rico, and Vieques; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 38, 1904 (monog.); Clark, Proc. Bost. Soc. N. H., 32, pp. 289, 304, 305, 306, 1905—St. Vincent, Grenadines (Canouan, Carriacou), Grenada; Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Dominican Republic; Wetmore, Auk, 33, p. 416, 1916—Vieques; idem, U. S. Dept. Agric. Bull., 326, p. 88, 1916—Porto Rico (habits, food); Noble, Bull. Mus. Comp. Zool., 60, p. 388, 1916—Guadeloupe and Grande Terre; Peters, l.c., 61, p. 418, 1917—Sosúa, Rio San Juan, Dominican Republic; Struthers, Auk, 40, p. 475, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 111, 1926—Cartagena Lagoon, Porto Rico; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 477, 1927—Mona, Porto Rico, Vieques (habits); Bond, Proc. Acad. Nat. Sci. Phila., 80, pp. 507, 535, 1928—Haiti (Lake Euriquillo), Santa Lucia, St. Vincent, and Barbados; Danforth, Auk, 45, p. 488, 1928—Jamaica (Kingston, Lumsden, Black River); idem, Auk, 46, p. 371, 1929—Hispaniola; Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 320, 1929—Moca, Santo Domingo; Bond, Auk, 47, p. 271, 1930—Fredericksted, St. Croix; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 323, 1931—Hispaniola (habits).

*Progne chalybea chalybea* (not *Hirundo chalybea* Gmelin) Hellmayr, Nov. Zool., 13, p. 13 (in text), 1906—part, "male" [=female] from Castare, Tobago (spec. reexamined).

*Range*.—Greater and Lesser Antilles (islands of Jamaica, Haiti, Mona, Porto Rico, Vieques, St. Croix, St. Martin, St. Eustatius, St. Christopher, Dominica, Martinique, Santa Lucia, St. Vincent, Grenadines [Canouan, Carriacou], Grenada, Barbados) and the island of Tobago.<sup>1</sup>

<sup>1</sup> A single adult male from Tobago has the throat and sides more suffused with dark brown, less "solidly" violaceous steel blue, than is the rule in Antillean specimens, but similar individuals also occur on other islands, one from St. Eustatius being hardly distinguishable on this score. Such examples closely approach *P. c. chalybea*, which is already found in Trinidad. A female from Tobago, however, seems to be exactly like West Indian birds.

*Additional specimens examined*.—Jamaica, 1; Porto Rico, 2; Grenada, 3; Tobago (Castare), 1.



11: Jamaica (Kingston, 1; unspecified, 1); Haiti (Samaná, 5); St. Eustatius, 2; St. Kitts, 1; Tobago, 1.

**Progne (subis?) sinaloae Nelson.<sup>1</sup> SINALOA MARTIN.**

*Progne sinaloae* Nelson, Proc. Biol. Soc. Wash., 12, p. 59, 1898—Plomosas, Sinaloa, Mexico (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 40, 1904—Plomosas, Sinaloa (crit.); Holt, Auk, 43, p. 550, 1926—Laguna Perdida, Dept. Peten, Guatemala (crit.).

*Range*.—Western Mexico, in State of Sinaloa (Plomosas), and Guatemala (Laguna Perdida, Dept. Peten, March 14, 1920).

**\*Progne chalybea chalybea (Gmelin).<sup>2</sup> WHITE-BELLIED MARTIN.**

*Hirundo chalybea* Gmelin, Syst. Nat., 1, (2), p. 1026, 1789—based on "L'Hirondelle de Cayenne" Brisson (Orn., 2, p. 495, pl. 46, fig. 1) and Daubenton, Pl. Enl., pl. 545, fig. 2; Cayenne.

*Hirundo purpurea* (not of Linnaeus) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 671, "1848" [=1849]—coast of British Guiana.

*Progne purpurea* Léotaud, Ois. Trinidad, p. 92, 1866—Trinidad (part, descr. of "female" and "young male"<sup>3</sup>).

*Progne dominicensis* (not *Hirundo dominicensis* Gmelin) Sclater, Proc. Zool. Soc. Lond., 25, p. 201, 1857—San Andres Tuxtla, Vera Cruz; idem, l.c., 27, p. 364, 1859—Jalapa, Vera Cruz; idem, l.c., 28, p. 292, 1860—Esmeraldas, Ecuador; idem, Cat. Coll. Amer. Bds., p. 38, 1862—part, spec. a, c, e, Esmeraldas, Jalapa, and Guatemala; Sclater and Salvin, Ibis, 1859, p. 13—Guatemala; Salvin, Ibis, 1859, p. 466—Belize, British Honduras; Taylor, Ibis, 1860, p. 110—Comayagua, Honduras; Owen, Ibis, 1861, p. 61—San Gerónimo, Guatemala (egg descr.).

*Progne chalybea* Cabanis, Journ. Orn., 8, p. 402, 1860—San José, Costa Rica (crit.); Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 133—Cartagena; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 318, 1862—Panama Railroad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad; idem, l.c., 1873, p. 258—Xeberos, Yurimaguas, Chyavetas,

<sup>1</sup> *Progne (subis?) sinaloae* Nelson is stated by Ridgway to be similar in coloration to *P. s. dominicensis*, but to differ by smaller size (wing of males, 136–138; tail, 67–72). Without any material from Sinaloa it is, of course, impossible to express an opinion on the validity of the form, but it should be noted that various individuals from the West Indies (St. Kitts, St. Eustatius) have even shorter wings (132–133), though at the same time longer tails (77–84). Nelson's original specimens, shot late in July, were probably breeding birds, while the only other recorded example, a male in the Shufeldt Collection taken at Laguna Perdida, eastern Guatemala, on March 14, 1920, may have been a migrant. The female is still unknown. As in neighboring parts of Mexico (Tepic, Guanajuato, Durango, Sonora) *P. s. subis* and *P. s. hesperia* are reported to breed, the status of *P. sinaloae* is shrouded in considerable obscurity.

<sup>2</sup> It is not impossible that "L'Hirondelle tachetée de Cayenne" Daubenton, Pl. Enl., pl. 546, fig. 1, upon which *Hirundo maculata* Boddart (Tabl. Pl. Enl., p. 32, 1783) and *Hirundo maculosa* Kuhl (Buff. et Daub. Fig. Av. Nom. Syst., p. 10, 1820) are based, might have been intended for the juvenile plumage of the White-bellied Martin.

<sup>3</sup> The adult male "décrit d'après les auteurs" is, of course, that of *P. s. subis*.

and Chamicuros, Peru; idem, l.c., 1879, p. 495—Remedios, Colombia; Baird, Rev. Amer. Bds., 1, p. 282, 1865—Cayenne (crit.); Layard, Ibis, 1873, p. 377—Pará; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 224, 1883—part, Mexico to the Amazon, and Ecuador (excl. syn. *H. domestica*, Brazil and Paraguay); Taczanowski, Orn. Pér., 1, p. 237, 1884—Peruvian localities; Salvin, Ibis, 1885, p. 205—Bartica Grove, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 178, 633, 1885 (monog.); idem and Wyatt, Monog. Hirund., 2, p. 473, pl. 92, 1887 (monog.); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Panama and Costa Rica (San José); Stone, Proc. Acad. Nat. Sci. Phila., 1890, p. 210—Shkolak, Yucatan; Cherrie, Auk, 9, p. 22, 1892—San José, Costa Rica (nesting); Richmond, Proc. U. S. Nat. Mus., 16, p. 486, 1893—Bluefields, Nicaragua; Chapman, Bull. Amer. Mus. N. H., 6, p. 28, 1894—mouth of Ciperó River, Moruga, and Monos Boca, Trinidad; Robinson and Richmond, Proc. U. S. Nat. Mus., 18, pp. 678, 685, 1896—Porlamor and El Valle, Margarita Island, and La Guaira, Venezuela; Chapman, Bull. Amer. Mus. N. H., 10, p. 26, 1898—Jalapa, Vera Cruz; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 176, 1901—La Guaira, Venezuela; Berlepsch and Hartert, Nov. Zool., 9, p. 14, 1902—Venezuela (Quiribana de Caicara and Altagracia, Orinoco; Suapure, Caura); Bangs, Proc. New Engl. Zool. Cl., 3, p. 59, 1902—Boquete and Bugaba, Panama; Clark, Auk, 19, p. 266, 1902—Margarita Island; Ménégau, Bull. Mus. Hist. Nat., Paris, 10, p. 116, 1904—Mahury, French Guiana; Miller, Auk, 23, p. 226, 1906—Rio Grande City and Hidalgo, Texas; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 123, 1907—El Rancho, Guatemala; Cory, l.c., p. 249, 1909—Porlamor, Margarita Island; Ferry, l.c., p. 273, 1910—Guayábo, Costa Rica; Berlepsch, Nov. Zool., 15, pp. 110, 316, 1908—Cayenne and Mahury, French Guiana; Snethlage, Journ. Orn., 56, p. 9, 1908—Cachoeira, Rio Purús; Jewell, Auk, 30, p. 428, 1913—Panama; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 206, 1913—Caño Corosal, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 471, 1914—Pará, Santo Antonio do Prata, Rio Guamá (Ourém), Marajó (Livramento), Amapá, Monte Alegre, and Rio Purús (Cachoeira); Chubb, Bds. Brit. Guiana, 2, p. 331, 1921—numerous localities (habits); Griscom and Crosby, Auk, 43, p. 27, 1926—Hidalgo, Texas.

*Progne chalybea* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Vinces and Balzar, Ecuador.

*Progne chalybea chalybea* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 40, 1904 (monog., full bibliog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 155, 1905—San Miguel Island; idem, l.c., p. 220, 1906—savanna of Panama; Cole, l.c., 50, p. 134, 1906—Chichen Itza, Yucatan; Hellmayr, Nov. Zool., 13, p. 13, 1906—Seelet, Trinidad; Bangs, Auk, 24, p. 305, 1907—Boruca and Paso Real de Terraba, Costa Rica; Beebe, Zoologica (N.Y.), 1, p. 98, 1909—Rio Guarapiche, Orinoco Delta; Hellmayr, Nov. Zool., 17, p. 269, 1910—Calama, Rio Madeira; Carriker, Ann. Carnegie Mus., 6, p. 792, 1910—Costa Rica; Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1093—Nóvita, Chocó, Colombia; Peters, Auk, 30, p. 377, 1911—Xcopen and Camp Mengel, Quintana Roo; Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 5, 87, 118, 1912—Peixe-Boi,

Pará, and Mexiana; Beebe, *Zoologica* (N.Y.), 2, p. 103, 1916—Utinga, Pará; Cherrie, *Sci. Bull., Mus. Brookl. Inst.*, 2, p. 160, 1916—Orinoco River (Altagracia, Caicara, Quiribana de Caicara, Las Guacas, San Felix River) and Caura, Venezuela; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 502, 1917—Cali, Malena, Algodonal (Magdalena River), and Florencia, Colombia; Stone, *Proc. Acad. Nat. Sci. Phila.*, 70, p. 270, 1918—Gatun, Panama; Bangs and Penard, *Bull. Mus. Comp. Zool.*, 62, p. 82, 1918—vicinity of Paramaribo, Dutch Guiana; Rendahl, *Ark. Zool.*, 12, No. 8, p. 35, 1919—Pacora, Panama; idem, *l.c.*, 13, No. 4, p. 45, 1921—Pearl Islands; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 438, 1922—Mamatoco and Fundación, Santa Marta, Colombia; Hallinan, *Auk*, 41, p. 323, 1924—Farfan, Balboa, and Darien Radio Station, Panama; Chapman, *Bull. Amer. Mus. N. H.*, 55, p. 555, 1926—Bucay and Santa Elena, Ecuador; Stone, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 171, 1928—Rio Inhangapy, Pará; Kennard and Peters, *Proc. Bost. Soc. N. H.*, 38, p. 458, 1928—Almirante, Panama; Peters, *Bull. Mus. Comp. Zool.*, 69, p. 456, 1929—Martinez Creek and Tela, Honduras; idem, *l.c.*, 71, p. 329, 1931—Swan Key, Panama; Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 316, 1930—Calama, Rio Madeira, and Utiarity, Matto Grosso; Griscom, *l.c.*, 64, p. 283, 1932—Hacienda California, Guatemala.

*Progne leucogaster* Baird, *Rev. Amer. Bds.*, 1, p. 280, May, 1865—San Andres (near Vera Cruz), Tehuantepec, Guatemala (Cahabón, Dueñas), Salvador (Acajutla), Costa Rica (San José), Cartagena, Panama (type from Cahabón, Vera Paz, Guatemala, in U. S. National Museum); Lawrence, *Ann. Lyc. Nat. Hist. N.Y.*, 8, p. 96, 1868—San José, Costa Rica; Frantzius, *Journ. Orn.*, 17, p. 294, 1869—Costa Rica; Sumichrast, *Mem. Bost. Soc. N. H.*, 1, p. 547, 1869—Orizaba, Vera Cruz; Lawrence, *Bull. U. S. Nat. Mus.*, 4, p. 17, 1876—Tehuantepec (Barrio); Ferrari-Perez, *Proc. U. S. Nat. Mus.*, 9, p. 139, 1886—Jalapa, Vera Cruz.

*Progne leucogastra* Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1867, p. 569—Mexiana Island and Pará; idem, *l.c.*, 1867, pp. 749, 754—Xeberos and Yurimaguas, Peru; idem, *l.c.*, 1870, p. 836—San Pedro, Honduras; Wyatt, *Ibis*, 1871, p. 323—Catamucho, Magdalena River, Colombia; Nutting, *Proc. U. S. Nat. Mus.*, 5, p. 391, 1882—La Palma de Nicoya, Costa Rica.

*Progne domestica* (not *Hirundo domestica* Vieillot) Pelzeln, *Orn. Bras.*, 1, p. 17, 1868—part, Obidos (spec. examined).

**Range.**—From the lower Rio Grande Valley in Texas<sup>1</sup> through eastern Mexico,<sup>2</sup> in states of Coahuila (Sabinas), Tamaulipas (Vic-

<sup>1</sup> Two specimens on record: a male from Rio Grande City (April 25) and a female from Hidalgo (May 18, 1889).

<sup>2</sup> We have not seen any Mexican material. Birds from Guatemala and Costa Rica appear to be inseparable from those of South America. Specimens from Pará and Maranhão (Miritiba), by somewhat larger dimensions, approach the southern race, *P. c. domestica*. Some individuals from Guiana and Venezuela come so very close to certain specimens of *P. s. dominicensis* that one is tempted to assume their conspecific relationship. Cf., however, the footnote to *P. modesta murphyi* (p. 23).

**Material examined.**—Sixty-nine specimens from the whole range except Mexico and Texas.

toria), Vera Cruz, Oaxaca (Tehuantepec), Chiapas, Yucatan (Shkolak, Chichen Itza), and Quintana Roo (Xcopen, Camp Mengel), and Central America south to western Ecuador; eastern Peru; northern Brazil (the most southerly locality being Utiariti, in northern Matto Grosso), east into northern Maranhão; Venezuela; Guianas; island of Trinidad.

24: Mexico (Temax, Yucatan, 1); Guatemala (El Rancho, Zacapa, 1); Costa Rica (Miravalles, 2; Las Cañas, 1; Guayábo, 2; Limón, 1; San José, 2); Nicaragua (San Emilio, 1); Panama, Canal Zone (between Frijoles and Darien, 3; Colón, 1); Venezuela (Porlamar, Margarita Island, 1; Encontrados, Zulia, 2); Brazil, Amazonas (Bôa Vista, 1; Serra da Lua, 1); Peru (Moyobamba, 1; Lagunas, 3).

**\**Progne chalybea domestica* (Vieillot).<sup>1</sup> AZARA'S MARTIN.**

*Hirundo domestica* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 520, 1817—based on "*Golondrina domestica*" Azara, No. 300; Paraguay and La Plata River.

*Hirundo purpurea* (not of Linnaeus) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 68, 1837—part, Guarayos, Chiquitos, and Corrientes (spec. in Paris Museum examined).

*Progne purpurea* Gould, in Darwin, Zool. Beagle, 3, p. 38, 1839—part, Montevideo; Durnford, Ibis, 1877, p. 168—Buenos Aires (Sept. to Feb., breeding); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—part, Guarayos and Chiquitos (ex d'Orbigny); Gibson, Ibis, 1880, p. 22—Cape San Antonio, Buenos Aires (in part, breeding).

*Hirundo violacea* (not of Gmelin) Wied, Reise Bras., 1, p. 198 (8vo ed., p. 195), 1820—Quartel do Riacho, Espirito Santo.

*Hirundo chalybea* (not of Gmelin) Wied, Beitr. Naturg. Bras., 3, (1), p. 354, 1830—part, descr. of female and young, eastern Brazil.

*Progne chalybea* Sclater and Hudson, Proc. Zool. Soc. Lond., 1872, p. 606—part, Buenos Aires; Lee, Ibis, 1873, p. 133—Rio Gato, Entre Rios; White, Proc. Zool. Soc. Lond., 1882, p. 595—Flores, Buenos Aires; Barrows, Bull. Nutt. Orn. Cl., 8, p. 88, 1883—Concepción del Uruguay, Entre Rios (breeding); Dalglish, Proc. Roy. Phys. Soc. Edinb., 8, p. 78, 1884—Tala, Uruguay (nest and eggs descr.); Gibson, Ibis, 1885, p. 277—Paysandú, Uruguay; Sclater and Hudson, Arg. Orn., 1, p. 25, 1888—part, Argentina; Frenzel, Journ. Orn., 39, p. 118, 1891—Cordoba; Holland, Ibis, 1891, p. 16; idem, Ibis, 1892, p. 195—Estancia Espartillar, Buenos Aires; Kerr, Ibis, 1892, p. 123—Fortín Page, lower Pilcomayo; Koslowsky, Rev. Mus. La Plata, 6, p. 278, 1895—Chilecito, La Rioja; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 5, 1897—Caiza, Bolivia; Gibson, Ibis, 1918, p. 380—Cape San Antonio, Buenos Aires.

<sup>1</sup> *Progne chalybea domestica* (Vieillot) differs from the typical form only in larger size and paler throat and foreneck.

*Progne dominicensis* (not *Hirundo dominicensis* Gmelin) Burmeister, Syst. Uebers. Th. Bras., 3, p. 141, 1856—Nova Friburgo, Rio; Sclater, Cat. Coll. Amer. Bds., p. 38, 1862—part, spec. d, Brazil.

*Progne domestica* Burmeister, Journ. Orn., 8, p. 253, 1860—Argentina (in part); idem, Reise La Plata St., 2, p. 477, 1861—Argentina (part, "young"); Baird, Rev. Amer. Bds., 1, p. 282, 1865—Paraguay and Bolivia (crit.); Pelzeln, Orn. Bras., 1, p. 17, 1868—part, Rio de Janeiro, Marambaya, Ypanema, and Caiçara (spec. examined); Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 159—Conchitas, Buenos Aires (crit.); Sternberg, Journ. Orn., 17, p. 269, 1869—Buenos Aires (breeding habits); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 442—Minas Geraes (crit.); Berlepsch, Journ. Orn., 21, p. 234, 1873—Blumenau, Santa Catharina; Doering, Per. Zool. Arg., 1, p. 254, 1874—Barrancas, Corrientes; Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 81, 1884—Tandil, Buenos Aires; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 177, 633, 1885—Santa Catharina and Buenos Aires; idem and Wyatt, Monog. Hirund., 2, p. 469, 1887 (monog.); Allen, Bull. Amer. Mus. N. H., 3, p. 346, 1891—Chapada, Matto Grosso; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 3, 1895—Colonia Risso, Paraguay; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 118, 1899—Mundo Novo and Pedras Brancas, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 139, 1899—São Paulo (Ypiranga, Piracicaba, São Sebastião); idem, l.c., 4, p. 152, 1900—Cantagallo, Rio; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902—Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tucumán; Chubb, Ibis, 1910, p. 607—Sapucay, Paraguay; Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 77, 1910—Bahia (Joazeiro), Pernambuco (Pão d'Alho), and Piauhý (Parnaguá) (spec. examined); Grant, Ibis, 1911, p. 90—Los Yngleses, Ajó, and Colonia Mihanovitch, Formosa (breeding).

*Progne chalybea domestica* Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 116, 1885—Taquara, Rio Grande do Sul; Berlepsch, Journ. Orn., 35, p. 5, 1887—Lambaré, Paraguay; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba; Ihering, Cat. Faun. Braz., 1, p. 340, 1907—São Paulo (Piracicaba, Jundiah, Jaboticabal, São Sebastião), Minas Geraes (Vargem Alegre), and Paraná (Ourinho); Hellmayr, Nov. Zool., 15, p. 25, 1908—Rio Araguaya, Goyaz; Hartert and Venturi, l.c., 16, p. 168, 1909—Barracas al Sud, Buenos Aires; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 351, 1910 (range in Argentina); Chrostowski, Compt. Rend. Soc. Scient. Varsovie, 5, pp. 485, 499, 1912—Vera Guarany, Paraná; Bertoni, Faun. Parag., p. 61, 1914—Alto Paraná, Paraguay; Hussey, Auk, 33, p. 395, 1916—La Plata; Ménégauz, Rev. Franç. d'Orn., 9, p. 58, 1917—Poconé and Corumbá, Matto Grosso; Sanzin, El Hornero, 1, p. 51, 1918—Tunuyán, Mendoza; Dabbene, l.c., 1, p. 240, 1919—Isla Martín García; Tremoleras, l.c., 2, p. 22, 1920—Uruguay (Montevideo, Canelones, San José, Colonia, Rio Negro, Rocha); Daguerre, l.c., 2, p. 269, 1922—Rosas, Prov. Buenos Aires (breeding); Serié and Smyth, l.c., 3, p. 51, 1923—Santa Elena, Entre Rios (November to March); Giacomelli, l.c., 3, p. 68, 1923—La Rioja; Pereyra, l.c., 3, p. 171, 1923—Zelaya, Buenos Aires; Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 651, 1924—northern and eastern Buenos Aires (breeding);

Wetmore, Bull. U. S. Nat. Mus., 133, p. 346, 1926—Formosa (Formosa), Paraguay (Puerto Pinasco), Buenos Aires (Buenos Aires, Dolores, Lavalle, Santo Domingo), Mendoza, Uruguay (Carrasco, La Paloma, Lazcano, Corrales, Rio Negro); Wilson, El Hornero, 3, p. 359, 1926—Dept. General López, Santa Fé; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 181, 1926—Fazenda Ferreira, Paraná; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 265, 1929—Parnaguá, Piahy; Naumburg, Bull. Amer. Mus. N. H., 60, p. 316, 1930—Matto Grosso; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 306, 1930—San José, Formosa (crit.).

*Progne chalybea chalybea* Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 305, 1930—Bolivia (San José and Ignacito, Santa Cruz; crit.).

*Progne furcata* (not of Baird) Aplin, Ibis, 1894, p. 165—Uruguay (spec. in British Museum examined).

*Range*.—Brazil, from the interior of Piahy (Parnaguá) and Pernambuco through the eastern states south to Rio Grande do Sul and Matto Grosso; eastern Bolivia; Paraguay; Uruguay; and northern Argentina south to Buenos Aires, Cordoba, and Mendoza.<sup>1</sup>

14: Bolivia (Buenavista, Santa Cruz, 8); Brazil (Piraputanga, Matto Grosso, 2; Fazenda Cayoá, Salto Grande do Rio Parapanema, São Paulo, 2); Uruguay (Maldonado, 1); Argentina (Puerto Segundo, Misiones, 1).

### \**Progne modesta elegans* Baird. PATAGONIAN MARTIN.

*Progne elegans* Baird, Rev. Amer. Bds., 1, p. 275, May, 1865—Rio Vermejo, Argentina (descr. of young male and female; cotypes in U. S. National Museum); Barrows, Bull. Nutt. Orn. Cl., 8, p. 89, 1883—Bahia Blanca and Sierra de la Ventana, Buenos Aires; Todd, Auk, 42, p. 276, 1925 (crit.); Wetmore, Bull. U. S. Nat. Mus., 133, p. 346, 1926—General Roca (Rio Negro), Carhué (Buenos Aires), Victorica (Pampa), and Monte

<sup>1</sup> Birds from southern Brazil agree with a series from Paraguay in size, but have the throat and foreneck, on average, less variegated with whitish. This character, however, depends largely on seasonal conditions, the whitish edges being apt to disappear gradually as abrasion advances, and certain Paraguayan individuals are fully as dark-throated as any from Brazil. Birds from the plains of eastern Bolivia (Santa Cruz, Chiquitos), while not quite so large, appear to me better referred to *domestica*, although it must be admitted that no sharp and fast line can be drawn between Azara's Martin and typical *chalybea*. Specimens from Bahia and Piahy (Parnaguá) are hardly larger than others from Pará and northern Maranhão (Miritiba), which we have ranked with *P. c. chalybea*, but have the paler throat and foreneck with whitish edges of *domestica*. In Argentina the breeding range of *P. c. domestica* is evidently more northerly than that of *P. modesta elegans*, but in Bolivia it appears to replace the latter, which breeds in the highlands, in the hill country and plains of the east.

*Additional specimens examined*.—Piahy: Parnaguá, 2.—Bahia: Joazeiro, 1.—São Paulo: Ypanema, 5; Fazenda Cayoá, Salto Grande do Rio Parapanema, 1; Alambary, 1; Iguapé, 1.—Rio de Janeiro: Marambaya, 1.—Goyaz: Rio Araguaya, 4.—Bolivia: Chiquitos, 1; San José, Chiquitos, 1; San Ignacito, Santa Cruz, 4.—Paraguay: Villa Rica, 1; Puerto Casado, Chaco, 2; Nueva Germania, 1; San Luis de la Sierra, Apa Highlands, 5.—Uruguay: Santa Elena, Monzón, 1.—Corrientes, 1.—Entre Rios: La Soledad, 1.—Buenos Aires: Estancia Espartillar, 1; Ajó, 2.—Formosa: San José, 1.

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Ralo (Cordoba); idem, Univ. Calif. Pub. Zool., 24, p. 453, 1926—Corral Chico, Rio Negro; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 45, 1932—Paine, O'Higgins, Chile.

*Progne furcata* Baird, Rev. Amer. Bds., 1, p. 278, May, 1865—Chile (descr. of adult male; type in U. S. National Museum); Sclater, Proc. Zool. Soc. Lond., 1867, pp. 321, 337—Chile (ex Baird); Philippi, l.c., 1868, p. 531—Chile (occurrence denied); Cabanis, Journ. Orn., 26, p. 195, 1876—Sierra de Cordoba; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 175, 633, 1885—"Chile," Mendoza, and Rio Negro; Sclater and Hudson, Arg. Orn., 1, p. 24, 1888—Argentina; Sharpe and Wyatt, Monog. Hirund., 2, p. 459, pl. 89, 1889—Patagonia to Mendoza (monog.); C. Burmeister, Anal. Mus. Nac. Buenos Aires, 3, p. 317, 1890—Cerrito Dóctor, Chubut; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba; Frenzel, Journ. Orn., 39, p. 118, 1891—Cordoba; Reed, Ibis, 1893, p. 595—Chile; Holland, Ibis, 1895, p. 214—Santa Elena, Entre Rios (spec. examined); idem, Ibis, 1896, p. 315—Santa Elena (spec. examined); Reed, Anal. Univ. Chile, 93, p. 199, 1896—Paine, O'Higgins, Chile; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 5, 1897—Caiza and Aguiarenda, Bolivia (spec. examined); Albert, Anal. Univ. Chile, 100, p. 879, 1898—Chile (monog.); Lönnberg, Ibis, 1903, p. 456—San Luis, Tarija, Bolivia; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tapia, Tranquitas, and Tucumán; Baer, Ornith., 12, p. 215, 1904—Santa Ana and Tapia, Tucumán (spec. in Paris Museum examined); Bruch, Rev. Mus. La Plata, 11, p. 256, 1904—Molinos, Salta; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 351, 1910 (range in Argentina); Grant, Ibis, 1911, p. 89—Los Yngleses, Ajó, Buenos Aires (spec. examined); Gibson, Ibis, 1918, p. 380—Cape San Antonio, Buenos Aires; Dinelli, El Hornero, 1, p. 61, 1918—Tucumán (breeding; nest and eggs descr.); Peters, Bull. Mus. Comp. Zool., 65, p. 327, 1923—upper Rio Cumayo, down to the Limay, and Puesto Horno to Talagapa, Rio Negro (breeding); Tremoleras, El Hornero, 2, p. 22, 1920—Montevideo, Canelones, and San José, Uruguay; Wace, l.c., 2, p. 204, 1921—Falkland Islands (visitor); Giacomelli, l.c., 3, p. 68, 1923—La Rioja; Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 651, 1924—Prov. Buenos Aires; Wilson, El Hornero, 3, p. 359, 1926—General López, Santa Fé; Pereyra, l.c., 4, p. 32, 1927—Conhelo, Pampa; Bennett, Ibis, 1926, p. 331—Falkland Islands (visitor); Stone, Rep. Princet. Univ. Exp. Patagonia, Orn., 2, p. 816, 1928—Patagonia.

*Hirundo (Progne) furcata* Oustalet, Miss. Sci. Cap Horn, 6, p. B. 258, 1891—Patagonia.

*Hirundo purpurea* (not of Linnaeus) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 68, 1837—part, Mizque, Bolivia, and Patagonia (spec. in Paris Museum examined).

*Progne purpurea* Gould, in Darwin, Zool. Beagle, 3, p. 38, 1839—part, Bahia Blanca, Buenos Aires; Fraser, Proc. Zool. Soc. Lond., 11, p. 120, 1843—Mendoza and Villa Vicencia (breeding); Sclater, l.c., 1872, p. 548—Rio Negro (spec. examined); Sclater and Hudson, l.c., 1872, p. 607—Bahia Blanca and Carmen de Patagones (breeding); Durnford, Ibis, 1877, p. 32

—Tosca cliffs and Ninfas Point, Chubut Valley; idem, *Ibis*, 1878, p. 392  
 —Tambo Point, Chubut (breeding); Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1879, p. 595—part, Mizque, Bolivia (ex d'Orbigny); Gibson, *Ibis*, 1880, p. 22—Cape San Antonio, Buenos Aires (part, "two entirely black specimens"); White, *Proc. Zool. Soc. Lond.*, 1882, p. 595—Fuerte de Andalgala, Catamarca; Holmberg, *Act. Acad. Nac. Cienc. Cordoba*, 5, p. 81, 1884—Tandil and La Tinta, Prov. Buenos Aires.

*Progne domestica* (not *Hirundo domestica* Vieillot) Burmeister, *Journ. Orn.*, 8, p. 253, 1860—Argentina (part); idem, *Reise La Plata St.*, 2, p. 477, 1861—La Plata countries (part).

**Range.**—Southern and western Argentina, breeding from the southern border of Buenos Aires Province south to the Chubut, west to the Andes, and north to the highlands of Bolivia (Tarija; Valle Grande; Santa Cruz; Mizque, Cochabamba); on migration spreading through Buenos Aires Province north to Entre Rios, Santa Fé, and Uruguay, and south to the Falkland Islands; accidental in Chile (one record from Paine, O'Higgins).<sup>1</sup>

1: Argentina (San Cristóbal, Santa Fé, 1).

### ***Progne modesta murphyi* Chapman.<sup>2</sup> PERUVIAN MARTIN.**

<sup>1</sup> Breeding birds have been examined from the Rio Negro, Chubut, Tucumán (Tapia, Santa Ana), and southeastern Bolivia (Caiza, Tarija). Adult females are bright steel blue above like the males, while the under parts are very dark sooty brown, the feathers being apically edged with whitish.

A female from Santa Fé (San Cristóbal; Nov. 26, 1916. Robin Kemp) tends toward *P. c. domestica* by having a distinct white abdominal area and broader white edges to the under tail coverts, and raises once more the question of possible conspecific relationship.

**Material examined.**—Argentina: Santa Elena, Entre Rios, 2 (adult male, Oct. 11, 1894; young male, June 21, 1894. A. H. Holland); Los Yngleses, Ajó, Buenos Aires, 1 (adult male, Jan. 3, 1909. C. B. Grant); Mendoza, 5; Tapia, Tucumán, 2 (adult male and female, Dec. 2, 12, 1902. G. A. Baer); Santa Ana, Tucumán, 1 (adult male, Nov. 20, 1902. G. A. Baer); Rio Negro, 3 (two males, one female, Sept., Oct., 1871. H. W. Hudson); Rio Negro, 3 (d'Orbigny); Chubut, 1 (adult female, Nov. 9, 1875. H. Durnford).—Bolivia: Mizque, Cochabamba, 1; Valle Grande, 1; Santa Cruz, 4 (two males, two females, Oct., 1889. G. Garlepp); Caiza, Tarija, 2 (adult male and female, Feb. A. Borelli).

<sup>2</sup> *Progne modesta murphyi* Chapman: Nearest to *P. m. elegans*, but with much shorter and less deeply forked tail. Adult male without any, or with merely a slight suggestion of the white patch on the sides of the flanks. Female very differently colored, the upper parts mouse-gray, excepting a broad shining steel blue band across the middle of the back involving the scapulars; crown and hind-neck centered with dusky; longer uropygial feathers apically faintly glossed with steel blue; lesser upper wing coverts and longest tail coverts steel blue, somewhat duller than the dorsal area; lores and sides of the head blackish, becoming dusky posteriorly; wings and tail duller than in the male; under parts mouse gray, somewhat paler than the crown, the under tail coverts scarcely lighter than the abdomen, apically edged with whitish. Wing, 136–139, (female) 134½; tail, 70, (female) 63; furca, 15½–17; bill, 10½–12.

This interesting martin occupies an intermediate position between *P. m. modesta* and *P. m. elegans*. The male sex, while agreeing with the former in the absence of the conspicuous white patch on the sides of the flanks, differs nevertheless by much longer wings; less violaceous (approximately dusky slate-blue)



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*Progne murphyi* Chapman, Amer. Mus. Nov., 187, p. 6, 1925—cliffs near Talara, Dept. Piura, northwestern Peru (type in the American Museum of Natural History, New York).

*Hirundo purpurea* (not of Linnaeus) Tschudi, Arch. Naturg., 10, (1), p. 269, 1844—Peru; idem, Faun. Peru., Aves, p. 132, 1846—coast of Peru.

*Progne purpurea* Taczanowski, Orn. Pér., 1, p. 236, 1884—coast of Peru (ex Tschudi); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Ica, Peru.

*Range*.—Coast of Peru, from Piura (Talara) south to Lima (Huaral) and Ica (Hacienda Ocucaje).

### *Progne modesta modesta* Darwin.<sup>1</sup> GALAPAGOS MARTIN.

*Hirundo concolor* (not of Sykes, 1832) Gould, Proc. Zool. Soc. Lond., 5, p. 22, Nov., 1837—"in insulis Galapagorum" (descr. of male; types from James Island in collection of Zoological Society of London, now in British Museum).

*Progne modestus* Darwin, Zool. Beagle, 3, Part 3, pl. 5, 1838—new name.

*Progne modesta* Gould, in Darwin, Zool. Beagle, 3, Part 9, p. 39, July, 1839—James Island; Prévost and Des Murs, Voy. Venus, 5, Zool., p. 182, 1855—Charles Island (female); Ridgway, Proc. U. S. Nat. Mus., 19, p. 505, 1897—Charles, Indefatigable, and James (monog.); Baur, Amer. Natur., 31, pp. 782, 783, 1897—Albemarle, Duncan, and Barrington Islands; Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 347, 1904—Charles, Chatham, Barrington, Indefatigable, Seymour, James, and Albemarle Islands; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 43, 1904—Galapagos Islands (monog.).

*Hirundo modesta* Néboux, Rev. Zool., 3, p. 291, 1840—Charles Island (descr. of female); Sundevall, Proc. Zool. Soc. Lond., 1871, p. 125—James Island (crit.).

gloss of the body plumage, which, moreover, is much duller and less extensive on the lower parts, being confined to relatively narrow apical margins, especially on throat and foreneck; mainly fuscous under tail coverts with but slightly glossy apical edges; and horn brown instead of whitish under side of the shafts of the primaries. A topotype from Talara lacks all trace of white on the flanks, but a male from Ica shows there a few scattered white-tipped feathers. The female looks very different from that of *P. m. modesta*, being much grayer both above and below, with a broad shining blue band across the back. While *modesta*, *murphyi*, and *elegans* are clearly representative forms, certain analogies in the coloration of *subis* and *murphyi* in the female sex raise the question if all the purple martins of North and South America are not merely races of a single taxonomic entity. This point, however, cannot be settled before the breeding ranges and interrelationship of the Mexican forms (*subis*, *sinaloae*, *chalybea*) have been satisfactorily worked out, and in the meantime I prefer to maintain the *modesta* group and *P. chalybea* as separate specific units.

*Material examined*.—Piura: Talara, 1 (adult male).—Ica: Hacienda Ocucaje, 2 (adult male and female, Nov. 29, Dec. 12, 1889. J. Kalinowski).

<sup>1</sup> *Progne modesta modesta* Darwin is characterized among its affines by small size, purplish blue gloss of the adult male without trace of silky white feathers on the sides of the flanks, and uniform dark brown body plumage of the female without conspicuous white edges (except on the under tail coverts). Wing, 121–129, (female) 116–123; tail, 64–69, (female) 57–61; furca, 14–17; bill, 10–11.

*Material examined*.—Indefatigable, 5; Albemarle, 3; Charles, 1.

*Progne concolor* Baird, Rev. Amer. Bds., 1, p. 278, 1865—Galapagos Islands; Salvin, Trans. Zool. Soc. Lond., 9, p. 476, 1876—James and Charles Islands; Sharpe, Cat. Bds. Brit. Mus., 10, p. 176, 1885—"Chatham"—James Island; idem and Wyatt, Monog. Hirund., 2, p. 463, pl. 90, 1889—James, Charles, and Indefatigable Islands (monog.); Ridgway, Proc. U. S. Nat. Mus., 12, p. 105, 1890—Eden Rock, Indefatigable Island; Rothschild and Hartert, Nov. Zool., 6, p. 152, 1899—Charles, Chatham, and Albemarle (crit.); idem, l.c., 9, p. 386, 1902—Gardner Bay, Hood and Daphne Islands (eggs descr.); Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 205, 1919 (life history); Swarth, Occas. Pap. Calif. Acad. Sci., 18, p. 102, 1931—Galapagos (crit.).

*Range*.—Central and southern islands of the Galapagos Archipelago (James, Albemarle, Duncan, Daphne, Seymour, Indefatigable, Barrington, Chatham, Charles, and Hood).

### Genus PHAEOPROGNE Baird

*Phaeoprogne* Baird, Rev. Amer. Bds., 1, p. 283, 1865—type, by subs. desig. (Sharpe, Cat. Bds. Brit. Mus., 10, p. 172, 1885), *Hirundo tapera* Linnaeus.

### \**Phaeoprogne tapera tapera* (Linnaeus). BROWN-CHESTED MARTIN.

*Hirundo tapera* Linnaeus, Syst. Nat., 12th ed., 1, p. 345, 1766—based chiefly on "L'Hirondelle d'Amérique" Brisson (Orn., 2, p. 502, pl. 45, fig. 3; Cayenne) and "Tapera" Marcgrave (Hist. Nat. Bras., p. 205; northeastern Brazil).<sup>1</sup>

*Hirundo pascuum* Wied, Beitr. Naturg., Bras., 3, (1), p. 360, 1830—campos of Bahia (type lost; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 216, 1889).

*Phaeoprogne tapera immaculata* Chapman, Bull. Amer. Mus. N. H., 31, p. 156, 1912—Chicoral, near Giradot, Magdalena River, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 502, 1917—Colombia (Chicoral, Bogotá), Ecuador (Duran), Venezuela (Maripa), and Brazil (Bahia, Rio Xingú) (crit.); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 160, 1916—Caicara, Orinoco, and Caura Valley (Suapure, Maripa), Venezuela; Chapman, Bull. Amer. Mus. N. H., 55, p. 555, 1926—Duran, Ecuador, and Pílares and Lamor, northwestern Peru; Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 4, p. 234, 1932—Isla Silva, Ecuador.

<sup>1</sup> Linné's rather vague diagnosis leaves it an open question whether he used Marcgrave as his principal basis. While Marcgrave correctly says "totum corpus superius, collum, dorsum, alae et cauda pennas habent coloris ex fusco cum gryseo mixti" and "sub gutture et in pectore grysei est coloris, cum albo mixti, venter est albus, uti et sub cauda albet," Linnaeus describes the bird as "corpore nigricante, subtus albo" and adds "alba sunt gula, crissum, rachis subtus remigum, abdomen." Since he accepts Marcgrave's vernacular name as specific term, we may, however, follow Berlepsch and Hartert (Nov. Zool., 9, p. 14, 1902) in taking eastern Brazil as type locality. The "*Hirundo americana tapera*" of Sloane (Nat. Hist. Jamaica, 2, p. 212), also quoted by Linnaeus, does not belong here at all, and may be a swift.

*Progne tapera* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 672, "1848" [=1849]—Essequibo River, British Guiana; Baird, Rev. Amer. Bds., 1, p. 286, 1865 (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 178—upper Ucayali, Peru (eggs descr.); idem, l.c., 1867, p. 569—Rio Tocantins, Brazil; idem, l.c., 1867, p. 749—Xeberos, Peru; idem, l.c., 1868, p. 627—Puerto Cabello, Venezuela; Wyatt, Ibis, 1871, p. 323—Magdalena Valley, Colombia; Sclater, Proc. Zool. Soc. Lond., 1872, p. 606—part, Bogotá and Puerto Cabello; Sclater and Salvin, l.c., 1873, p. 258—Ucayali and Xeberos, Peru (eggs descr.); Taczanowski, l.c., 1877, p. 320—between Tumbes and Santa Lucia, Peru; Taczanowski, Orn. Pér., 1, p. 236, 1884—Peruvian localities; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 180, 633, 1885 (monog., in part); Sharpe and Wyatt, Monog. Hirund., 2, p. 479, pl. 93, 1889—part, northern South America; Berlepsch and Hartert, Nov. Zool., 9, p. 14, 1902—Caicara, Orinoco, and Suapure, Caura, Venezuela; Goeldi, Ibis, 1903, p. 499—Rio Capim, Pará; Nicoll, Ibis, 1904, p. 40—Bahia; Ménégau, Bull. Mus. Hist. Nat., Paris, 10, p. 116, 1904—Oyapock, French Guiana; Berlepsch, Nov. Zool., 15, pp. 110, 316, 1908—Approuague and Oyapock, French Guiana; Hellmayr, l.c., 17, p. 269, 1910—Allianca, Rio Madeira; Snethlage, Journ. Orn., 56, pp. 9, 497, 1908—Cachoeira, Rio Purús, and Villa Braga, Tapajóz; Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 77, 1910—Pernambuco (Pão d'Alho, Recife) and Bahia (Joazeiro); Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Rio Capim; Snethlage, Bol. Mus. Goeldi, 8, p. 471, 1914—Pará, Quati-Purú, Rio Capim (Araproaga), Rio Xingú (Victoria), Rio Tapajóz (Villa Braga), Rio Purús (Cachoeira), Marajó (Pindobal), Cunany, Monte Alegre, and Rio Maecurú.

*Phaeoprogne tapera* Todd, Auk, 46, p. 186, 1929—Venezuela (Maripa, Altigracia, San Felix, Sabana de Mendoza), Colombia, and northern Brazil (crit.).

*Phaeoprogne tapera tapera* Chapman, Auk, 46, pp. 348, 356, 1929 (crit.); Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1931—Fundación River, near Aracataca, Magdalena, Colombia.

*Petrochelidon tapera* Pelzeln, Orn. Bras., 1, p. 17, 1868—part, Barra do Rio Negro [=Manãos] (Feb. 2; spec. in Vienna Museum examined).

*Range*.—Breeding in northern Brazil, through the eastern states south to Bahia, and throughout Amazonia west to eastern Peru; in French Guiana, Venezuela, and northern Colombia (Magdalena Valley), and probably in southwestern Ecuador (Chimbo, Duran) and northwestern Peru (Tumbes, Pílares, and Lamor, Dept. Tumbes).<sup>1</sup>

<sup>1</sup> Birds from eastern Brazil (Pernambuco and Bahia), Colombia (Bogotá and Magdalena Valley), and Venezuela agree well together, not one of the specimens taken during the presumed breeding period showing a trace of the dusky spots in the middle of the breast. The grayish brown pectoral band is rather pale, and this color extends up over the sides of the neck. A single adult female from Chimbo, Ecuador—the only one we have seen from the Pacific coast—has this grayish pectoral zone reduced in extent and medially almost interrupted by whitish apical margins to the feathers, and differs, besides, from all other examples by whitish

3: Peru (Lagunas, lower Huallaga, 1); Venezuela (Rio Mucujón, Mérida, 1); Ecuador (Puente de Chimbo, 1 [Sept. 4]).

**\*Phaeoprogne tapera fusca (Vieillot).<sup>1</sup> SOUTHERN BROWN-CHESTED MARTIN.**

*Hirundo fusca* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 510, 1817—based on "*Golondrina parda*" Azara, No. 301, Paraguay; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 68, 1839—Chiquitos, Bolivia, and Corrientes, Argentina (spec. in Paris Museum examined).

*Progne fusca* Baird, Rev. Amer. Bds., 1, p. 285, 1865—Rio Vermejo (crit.).

*Cotyle tapera* (not *Hirundo tapera* Linnaeus) Burmeister, Syst. Uebers. Th. Bras., 3, p. 143, 1856—southern Brazil; idem, Journ. Orn., 8, p. 253, 1860—Paraná; idem, Reise La Plata St., 2, p. 477, 1861—Paraná; Sternberg, Journ. Orn., 17, p. 270, 1869—Est. San Juan José, Prov. Buenos Aires (nest descr.); Doering, Per. Zool. Arg., 1, p. 254, 1874—Barrancas, Corrientes; Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 81, 1884—Tandil and La Tinta, Buenos Aires.

*Cotyle tapera fusca* Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba.

sides of the neck and more distinct pale edges to the crown. The middle of the breast is as heavily spotted with dusky as in *P. t. fusca*, but this is clearly an individual feature, as Chapman noticed traces of these markings in only three out of ten birds from the Pacific coast.

*Additional specimens examined.*—French Guiana: Cayenne, 1.—Venezuela: Suapure, Caura, 3; Mérida, 2.—British Guiana: Annai, 1 (June 12).—Colombia: Bogotá, 10; Chicoral, Magdalena River, 2.—Peru: Iquitos, 1.—Eastern Ecuador: unspecified, 1 (March 26).—Brazil: Manáos, 1 (Feb. 2); Pão d'Alho, near Recife, Pernambuco, 1 (Feb. 17); Joazeiro, Bahia, 1 (March 11); Bahia, 10.

<sup>1</sup> *Phaeoprogne tapera fusca* (Vieillot) differs from the typical race by slightly darker upper parts; darker brown and more abruptly defined pectoral band continued along the middle of the breast by a row of coarse dark brown spots; more purely white throat, this color also encroaching on the sides of the neck; and, on average, longer wings.

The color characters are quite constant in a series from Uruguay, Paraguay, northern Argentina, and extreme southern Brazil (Rio Grande do Sul). Dimensions, on the other hand, do not afford an absolutely reliable criterion, although the present form frequently attains larger measurements than the northern *P. t. tapera*. Specimens from central Brazil (Goyaz and Matto Grosso) are variously intermediate between the two races in size as well as in coloration, but taken as a whole seem to be nearer to *fusca*. As has been pointed out by Chapman, the Southern Brown-chested Martin, on its winter migration, spreads into the breeding range of its northern ally as far north as British Guiana, Venezuela, and Colombia. Careful comparison of a number of specimens with a series of *P. t. fusca* fails to disclose the slightest difference, and strengthens the belief that they are merely migrants from the south.

*Additional specimens examined.*—Argentina: Flores, Buenos Aires, 1; Corrientes, 1; Tacuaglé, Formosa, 1; San José (Clorinda), Formosa, 4; Lapango, Pilcomayo, 3.—Paraguay: Puerto Sastre, Rio Paraguay, Chaco, 1; Zanja Moroti, Apa, 1; San Luis de la Sierra, Apa, 3.—Uruguay: Montevideo, 1.—Brazil: Taquara do Mundo Novo, Rio Grande do Sul, 2; Cuyabá, Matto Grosso, 1; Caicara, Matto Grosso, 1; Rio Araguaya, Goyaz, 2; São Bento, Maranhão, 1 (Aug. 28); Marabitanas, Rio Negro, 2 (April 7).—British Guiana: Georgetown, 1 (June).

- Progne tapera* Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 139—Conchitas, Buenos Aires; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 444—Minas Geraes; Sclater, Proc. Zool. Soc. Lond., 1872, p. 606—part, Buenos Aires; Durnford, Ibis, 1877, p. 168—Buenos Aires; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—Chiquitos, Bolivia (ex d'Orbigny); Gibson, Ibis, 1880, p. 23—Cape San Antonio, Buenos Aires; White, Proc. Zool. Soc. Lond., 1882, p. 595—Monte Grande and Pacheco, Buenos Aires; Barrows, Bull. Nutt. Orn. Cl., 8, p. 89, 1883—Concepción del Uruguay, Entre Rios; Gibson, Ibis, 1885, p. 277—Pay-sandú, Uruguay; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 116, 1885—Taquara, Rio Grande do Sul; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 180, 633, 1885—part, Brazil (Curytiba, Rio Grande do Sul), Buenos Aires, La Plata, and Orán (Salta); Sclater and Hudson, Argent. Orn., 1, p. 26, 1888—Argentina (habits); Sharpe and Wyatt, Monog. Hirund., 2, p. 479, 1889—part, Rio Grande, La Plata, Buenos Aires, Orán (Salta), and Bolivia; Holland, Ibis, 1890, p. 425; idem, Ibis, 1892, p. 195—Est. Espartillar, Buenos Aires; Frenzel, Journ. Orn., 39, p. 118, 1891—Cordoba; Allen, Bull. Amer. Mus. N. H., 3, p. 346, 1891—Chapada, Corumbá, and Uacuryzal, Matto Grosso; Aplin, Ibis, 1894, p. 166—Uruguay; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Mundo Novo, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 139, 1899—São Paulo; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902—Tucumán; Baer, Ornith., 12, p. 215, 1904—Santa Ana and Tapia, Tucumán; Lillo, Rev. Letr. Cienc. Soc., 3, p. 41, 1905—Tucumán; Ihering, Cat. Faun. Braz., 1, p. 340, 1907—São Paulo (Piracicaba, Caconde), Minas Geraes (Vargem Alegre), and Buenos Aires (Punta Lara); Hellmayr, Nov. Zool., 15, p. 25, 1908—Rio Araguaya, Goyaz; Hartert and Venturi, l.c., 16, p. 168, 1909—Barracas al Sud (Buenos Aires) and Tucumán (breeding); Grant, Ibis, 1911, p. 90—Buenos Aires (Los Yngleses, Ajó), Matto Grosso (Rabiche), Paraguay (Villa Pilar), and Corrientes (near Esquina); Bertoni, Faun. Parag., p. 61, 1914—Asunción, Paraguay; Ménégau, Rev. Franç. d'Orn., 9, p. 58, 1917—Corumbá, Matto Grosso; Gibson, Ibis, 1918, p. 381—Cape San Antonio, Buenos Aires (habits); (?) Chubb, Bds. Brit. Guiana, 2, p. 342, 1921—Ituribisci and Corentyn rivers; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—São Bento, Maranhão; (?) Young, Ibis, 1929, p. 237—Berbice, British Guiana (visitor, May to Aug.).
- Phaeoprogne tapera* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 352, 1910 (range in Argentina); Hussey, Auk, 33, p. 395, 1916—La Plata; Tremoleras, El Hornero, 2, p. 22, 1920—Canelones, Uruguay; Daguerre, l.c., 2, p. 269, 1922—Rosas, Prov. Buenos Aires (Oct. to April); Serié and Smyth, l.c., 3, p. 51, 1923—Santa Elena, Entre Rios; Giacomelli, l.c., 3, p. 68, 1923—La Rioja; Pereyra, l.c., 3, p. 171, 1923—Tigre, Buenos Aires; Marelli, Mem. Min. Obr. Publ. for 1922–23, p. 652, 1924—Prov. Buenos Aires; Wilson, El Hornero, 3, p. 359, 1926—Dept. General López, Santa Fé.
- Phaeoprogne tapera tapera* Wetmore, Bull. U. S. Nat. Mus., 133, p. 345, 1926—Paraguay (Puerto Pinasco), Uruguay (Carrasco, Montevideo, La Paloma, San Vicente, Lazcano, Rio Negro), and Buenos Aires (Lavalle, Dolores); Friedmann, Bull. Mus. Comp. Zool., 68, p. 210, 1927—Bovril Islands,

Santa Fé; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 265, 1929—São Bento, Maranhão (Aug. 28).

*Phaeoprogne tapera fusca* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 266 (in text), 1929—southern Brazil, Paraguay, and Argentina (crit.); Chapman, Auk, 46, pp. 348, 357, 1929 (crit., range); Naumburg, Bull. Amer. Mus. N. H., 60, p. 316, 1930—Paraguay (Fort Wheeler) and Matto Grosso (Descalvados, Urucúm, Agua Blanca de Corumbá, Rio São Lourenço, Palmiras); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 304, 1930—Formosa (Lapango, San José, Tacaaglé).

*Phaeoprogne fusca* Todd, Auk, 46, p. 188, 1929—Bolivia (Puerto Suarez, Buenavista, Rio Surutú) and Venezuela (El Trompillo, Guachi) (crit.).

*Petrochelidon tapera* Pelzel, Orn. Bras., 1, p. 17, 1868—part, Rio de Janeiro, Porto do Rio Araguay (Goyaz), Matto Grosso (Engenho do Cap Antonio Correia, Cuyabá, Caiçara), and Marabitanas, Rio Negro (spec. in Vienna Museum examined).

*Range*.—Breeding in northern Argentina (south to Buenos Aires, west to La Rioja and Tucumán), Uruguay, Paraguay, eastern Bolivia, and southern Brazil, north to Matto Grosso, Goyaz, and Minas Geraes; spreading in winter north to British Guiana, Venezuela, Amazonia (Orosa, Rio Marañón, Peru; Marabitanas, Rio Negro), and Colombia (Turbaco, near Cartagena).

10: Uruguay (Rio Uruguay, southwest of Dolores, Dept. Soriano, 2; El Corte, Dept. Maldonado, 2; Maldonado, 2); Argentina (Concepción, Tucumán, 1); Brazil (Chapada, Matto Grosso, 1; São Bento, Maranhão [March 28], 1); British Guiana (Georgetown [June], 1).

### Genus PETROCHELIDON Cabanis

*Petrochelidon* Cabanis, Mus. Hein., 1, p. 47, 1851—type, by subs. desig. (Gray, Cat. Gen. Subgen. Bds., p. 13, 1855), *Hirundo melanogaster* Swainson.

*Haplochelidon* Todd, Auk, 46, p. 245, 1929—type, by orig. desig., *Hirundo andecola* Lafresnaye and d'Orbigny.

### \**Petrochelidon pyrrhonota pyrrhonota* (Vieillot). NORTHERN CLIFF SWALLOW.

*Hirundo pyrrhonota* Vieillot,<sup>1</sup> Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 519, 1817—based on "*Golondrina rabadilla acanelada*" Azara, No. 305, Paraguay.

<sup>1</sup> With the exception of the blackish lower belly which may easily be construed as referring to the dusky under tail coverts, Azara's description, upon which Vieillot's name was based, is quite accurate, and the fact that he uses different terms for the color of the frontal band and that of the sides of the head and throat clearly indicates the Northern Cliff Swallow, in which the forehead is much paler than the other parts, and not *P. p. melanogaster*. Furthermore, specimens from southern Brazil (São Paulo, Rio Grande do Sul) and Buenos Aires, in coloration and dimensions agree perfectly with birds from the eastern United States, the wing of the males ranging from 110 to 117 mm., while their breast is as strongly tinged with ochraceous as that of others from New England and Illinois. Even if *P. p. hypopolia* be recognized, Vieillot's name would seem to be strictly applicable to the ordinary eastern form of the cliff swallow.

*Hirundo albifrons* Rafinesque, Kentucky Gazette, (n.s.), 1, No. 7, p. 3, Feb. 14, 1822—Newport, Kentucky, and Madison, Indiana.

*Hirundo lunifrons* Say, in Long's Exped. Rocky Mts., 2, p. 47, 1823—Rocky Mountains (type deposited in Peale's Museum, doubtless lost).

*Hirundo opifex* De Witt Clinton, Ann. Lyc. Nat. Hist. N. Y., 1, p. 161, 1824—new name for *H. lunifrons* Say.

*Hirundo republicana* Audubon, Ann. Lyc. Nat. Hist. N. Y., 1, p. 164, 1824—new name for *H. lunifrons* Say.

*Petrochelidon albifrons hypopolia* Oberholser, Canad. Field Natur., 33, p. 95, Jan., 1920—Fort Norman, Mackenzie (type in U. S. National Museum).<sup>1</sup>

*Petrochelidon americana* (not *Hirundo americana* Gmelin<sup>2</sup>) Pelzeln, Orn. Bras., 1, p. 17, 1868—São Paulo (Ytararé, Parnapitanga, Irisanga) and Matto Grosso (Engenho do Gama).

*Petrochelidon pyrrhonota* Durnford, Ibis, 1877, p. 169—thirty miles west of Buenos Aires; idem, Ibis, 1878, p. 58—Moreno (March) and Lujan Bridge (April), Buenos Aires; White, Proc. Zool. Soc. Lond., 1882, p. 595—Flores, Buenos Aires (Dec. 11); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 226, 1883 (monog.); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 193, 635, 1885 (monog.); Gibson, Ibis, 1885, p. 277—Paysandú, Uruguay (breeding?); Sclater and Hudson, Arg. Orn., 1, p. 30, 1888—part, Buenos Aires; Sharpe and Wyatt, Monog. Hirund., 2, p. 531, pl. 104, 1890 (monog., excl. Texan records); Ihering, Rev. Mus. Paul., 3, p. 140, 1899—São Paulo; idem, Cat. Faun. Braz., 1, p. 342, 1907—São Paulo; Hartert and Venturi, Nov. Zool., 16, p. 168, 1909—La Plata and Barracas al Sud, Buenos Aires (Feb.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 354, 1910—part, Barracas al Sud; Grant, Ibis, 1911, p. 91—Luiconia, Ajó, Buenos Aires (March); Bertoni, Faun. Parag., p. 61, 1914—Paraguay; Hussey, Auk, 33, p. 395, 1916—La Plata (Oct.); Gibson, Ibis, 1918, p. 381—Cape San Antonio, Buenos Aires; Castellanos, El Hornero, 2, p. 228, 1921—Flores, near Buenos Aires; Serié and Smyth, l.c., 3, p. 51, 1923—Santa Elena, Entre Rios; Pereyra, l.c., 3, p. 171, 1923—Zelaya, Buenos Aires (Dec., Feb.); Marelli, Mem. Min. Obr. Públ. for 1922–23, p. 652, 1924—Buenos Aires (Nov. to March); Naumburg, Bull. Amer. Mus. N. H., 60, p. 319, 1930—Matto Grosso.

*Cotyle pyrrhonota* Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 81, 1884—Tandil, Prov. Buenos Aires.

*Petrochelidon lunifrons lunifrons* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 47, 1904 (monog., full bibliog.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 110, 1923—Guantanamo, Cuba; Griscom, Auk, 50, p. 300, 1933—Puerto Jiménez, Costa Rica.

<sup>1</sup> Cf. also *P. a. aprophata* Oberholser, Sci. Pub. Clevel. Mus. N. H., 4, p. 6, 1932 (type from near Adel, Oregon).

<sup>2</sup> *Hirundo americana* Gmelin (Syst. Nat., 1, (2), p. 1017, 1789) is exclusively based on the "Hirondelle à croupion roux et queue carrée" of Montbeillard in Buffon's Hist. Nat. Ois. (éd. Impr. Roy.), 7, p. 346. This swallow, observed by Commerson in May, 1765, on the banks of the La Plata River, is so incompletely described—no mention being made of the pale-colored forehead or of the rufous color on throat and sides of the head—that I concur with Sclater and Salvin in considering it unidentifiable. Of course, there is a possibility that the variety with rufous throat might have been the present species, but even this is doubtful.

*Petrochelidon lunifrons* Lawrence, Mem. Bost. Soc. N. H., 2, p. 271, 1874—Mazatlan and Tepic, Mexico (breeding); Ramsden, Auk, 29, p. 396, 1912—Guantanamo, Cuba (Nov. 11, 1911).

**Range.**—Breeding from central Alaska, the upper Yukon Valley, northern Mackenzie, northern Ontario, southern Quebec, Anticosti Island, and Cape Breton Island south over nearly all of the United States, except Florida and the Rio Grande Valley, and along the coast district of western Mexico to Nayarit; migrates through Florida, Cuba (one record from Guantanamo), Costa Rica (one record from Puerto Jiménez), and apparently eastern South America, and winters in southern Brazil (states of São Paulo and Matto Grosso to Rio Grande do Sul), Paraguay, and north-eastern Argentina (Buenos Aires, Entre Rios).<sup>1</sup>

26: Connecticut (East Hartford, 1); Massachusetts (no locality, 1); New York (Cayuga, 1); Wisconsin (Beaver Dam, 5); Illinois (Lewistown, 1; St. Charles, 1; Worth, 1; Warsaw, 1; Joliet, 1; Olive Branch, 1); Arizona (Calabasas, 5); Colorado (Fort Lyon, 2); California (Oakland, 1; Claremont, 1; Sacramento, 1; Corona, 1); Canada (Prince Albert, Saskatchewan, 1).

**\**Petrochelidon pyrrhonota tachina* Oberholser. LESSER CLIFF SWALLOW.**

*Petrochelidon lunifrons tachina* Oberholser, Proc. Biol. Soc. Wash., 16, p. 15, 1903—Langtry, Texas (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 50, 1904—southwestern Texas to eastern Mexico, in winter to Panama (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 792, 1910—Laguna de Cartago and La Estrella de Cartago, Costa Rica; Thayer, Auk, 32, p. 103, 1915—Japonica, Kerr County, Texas; Smith, Auk, 33, p. 191, 1916—Kerr County, Texas; Griscom and Crosby, Auk, 43, p. 27, 1926—Brownsville, Rio Grande River, Texas (breeding).

<sup>1</sup> Further subdivision of the Northern Cliff Swallow, as recently advocated by Oberholser, seems to be impracticable, the distinctive features claimed for the birds of the northwest being altogether too unstable to be expressed in nomenclature. Very little is known regarding its migration routes. There is but a single authentic record of its occurrence in Central America and only one from the West Indies (Cuba), while it has not been found anywhere in western South America. The only specimen affording any clew as to its southward route is an adult male in the Munich Museum secured by S. Briceño in the Sierra of Mérida on October 16, 1898. Though common in winter, from November to April, in southern Brazil (São Paulo) and northeastern Argentina (provinces of Buenos Aires and Entre Rios), this swallow has not been met anywhere else in the intervening country. Gibson's record of its breeding at Paysandú, Uruguay, is, no doubt, erroneous.

**South American material examined.**—Brazil, São Paulo: Itararé, 3 (Feb. 2, 8; March 13); Irisanga, 1 (Dec. 5); Parnapitanga, 1 (Dec. 22); Rio Grande do Sul, 1 (no date).—Argentina: Pacheco, Buenos Aires, 1; La Plata, 1 (Feb. 28); Barracas al Sud, 1 (Feb. 27).—Venezuela: montañas, Sierra de Mérida, 1 (Oct. 16, 1897).



*Petrochelidon lunifrons* (not *Hirundo lunifrons* Say) Lawrence, Ann. Lyc. Nat. Hist. N. Y., p. 317, 1862—Panama Railroad; Baird, Rev. Amer. Bds., 1, p. 288, 1865—part, Panama (crit.); Ridgway, Proc. U. S. Nat. Mus., 11, p. 540, 1888—San José (Sept. 3) and Talamanca, Costa Rica; Mearns, Auk, 19, p. 73 (footnote), 1902—Rio Grande Valley, Texas.

(?) *Petrochelidon swainsoni*(i) (not of Sclater?) Baird, Rev. Amer. Bds., 1, p. 290, 1865—part, Mirador, Vera Cruz (Aug.); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 547, 1869—plateau region of Vera Cruz.

*Petrochelidon pyrrhonota* (not *Hirundo pyrrhonota* Vieillot) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 226, 1883—part, Panama; Salvin, Ibis, 1888, p. 256—Cozumel Island; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Punta de Sabana, Darien (Sept.).

*Range*.—Breeds in western Texas, the Rio Grande Valley, and supposedly through eastern Mexico to Vera Cruz; on migration in Costa Rica and Panama; winter home unknown.<sup>1</sup>

7: Texas (Ingram, 2; Kerrville, 1); Costa Rica (Puerto Jiménez, Golfo Dulce, 4).

**\**Petrochelidon pyrrhonota melanogaster* (Swainson). SWAINSON'S CLIFF SWALLOW.**

*Hirundo melanogaster* Swainson, Phil. Mag., (n.s.), 1, p. 366, 1827—tableland of Mexico (type in Bullock Collection).

*Petrochelidon melanogaster* Mearns, Auk, 19, p. 73 (footnote), 1902—Mexican boundary line to the westward, from the San Luis Mountains to Nogales.

*Petrochelidon lunifrons melanogaster* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 51, 1904—western portion of Mexican plateau (monog., bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 177, 1906—Rio Sestín, Durango (crit.); Griscom, Bull. Mus. Comp. Zool., 72, p. 358, 1932—Obaldia, Panama (Oct. 6).

*Petrochelidon swainsoni*(i) Sclater, Proc. Zool. Soc. Lond., 26, p. 296, 1858—Oaxaca, Mexico (type in British Museum); idem, l.c., 27, p. 376, 1859—Oaxaca; idem, Cat. Coll. Amer. Bds., 1, p. 40, 1862—Mexico; Baird, Rev. Amer. Bds., 1, p. 290, 1865—part, Mexico (crit.); Salvin, Ibis, 1866, p. 192—Dueñas, Guatemala; Lawrence, Bull. U. S. Nat. Mus., 4, p. 17, 1874—Tehuantepec City, Oaxaca (Oct.); Dugès, La Naturelle, 1, p. 141, 1869—Guanajuato; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 227, 1883—Mexico and Guatemala (Dueñas, Godines); Sharpe, Cat.

<sup>1</sup> It remains to be proved by an adequate series whether it is really the present form which breeds in eastern Mexico. The extension of its breeding range to Vera Cruz rests on a single example obtained by Sartorius in August at Mirador, which may, however, have been an early migratory individual. None of the South American specimens examined can be referred to *P. p. tachina*, all being considerably larger and paler on the forehead than a series from Texas.

While one might be tempted by their close similarity to regard *P. pyrrhonota* and *P. fulva* as conspecific, the breeding ranges of *P. p. tachina* and *P. fulva pallida* so nearly approach each other, if they do not actually overlap, that it seems premature to propose such a radical change without more ample information than is at present available.

Bds. Brit. Mus., 10, pp. 194, 635, 1885—Oaxaca, "Costa Rica," and Guatemala (Dueñas); Sharpe and Wyatt, Monog. Hirund., 2, p. 555, pl. 105, 1888 (monog.).

*Cotyle pyrrhonota* (not *Hirundo pyrrhonota* Vieillot) Burmeister, Journ. Orn., 8, p. 253, 1860—Tucumán; idem, Reise La Plata St., 2, p. 477, 1861—Tucumán (good descr.).

*Petrochelidon pyrrhonota* Sclater and Hudson, Arg. Orn., 1, p. 30, 1888—part, Tucumán (ex Burmeister); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 175, 1902—Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 41, 1905—Tucumán; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 354, 1910—part, Tucumán.

**Range.**—Breeds in southern Arizona, southwestern New Mexico, the western portion of the Mexican plateau south to Michoacan and Oaxaca, and (?) Guatemala; winters in northwestern Argentina (Tucumán).<sup>1</sup>

10: Arizona (Sonoita, 1; Calabasas, 1); Mexico (Tuxpan, Jalisco, 6); Argentina (Concepción, Tucumán, 2).

**\**Petrochelidon fulva fulva* (Vieillot). HISPANIOLAN CLIFF SWALLOW.**

*Hirundo fulva* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, p. 62, pl. 32, "1807"—Santo Domingo and Porto Rico (type from Santo Domingo in collection of P. L. Vieillot); March, Proc. Acad. Nat. Sci. Phila., 1863, p. 295—Jamaica (habits); Bryant, Proc. Bost. Soc. N. H., 10, p. 252, 1866—Porto Rico.

*Hirundo poeciloma* Gosse, Bds. Jamaica, p. 64, 1847—Jamaica (type now in British Museum).

*Petrochelidon fulva* Sclater, Proc. Zool. Soc. Lond., 1861, p. 72—Jamaica; Gundlach, Journ. Orn., 26, pp. 159, 172, 1878—Porto Rico; idem, Anal. Soc. Esp. Hist. Nat., 7, p. 198, 1878—Porto Rico; Cory, Bull. Nutt. Orn. Cl., 6, p. 152, 1881—Gonaives, Haiti; idem, Bds. Haiti and San Dom., p. 47, [pl. 21], fig. 3, 1884—Gonaives, Haiti, and Almercen, Santo Domingo; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 228, 1883—part, (?) Yucatan, Haiti and Jamaica; (?) Boucard, Proc. Zool. Soc. Lond., 1883, p. 442—Yucatan; Sharpe, Cat. Bds. Brit. Mus., 10, p. 196, 1885—part, (?) Yucatan, Santo Domingo, Jamaica, and Porto Rico; Sharpe and Wyatt, Monog. Hirund., 2, p. 561, 1887—part, (?) Yucatan, Santo Domingo, Jamaica, Porto Rico; Scott, Auk, 10, p. 181, 1893—Jamaica; Field, Auk, 11, p. 127, 1894—Port Henderson, Jamaica; Cherrie, Field Columb. Mus., Orn. Ser., 1, p. 12, 1896—Santo Domingo City (habits);

<sup>1</sup> Five birds from Tucumán, all taken in December, February, and March appear to be inseparable from Mexican examples, with which they agree not only in small size, but also in having the forehead chestnut like the cheeks and throat. Burmeister, who was the first to obtain specimens in Argentina, recorded it under the name of *C. pyrrhonota*, though definitely stating its characters. Griscom has lately listed a specimen of this swallow taken on its southward migration at Obaldia, eastern Panama, on October 6, 1930.

Bowdish, Auk, 20, p. 15, 1903—Porto Rico; Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Santo Domingo.

*Petrochelidon poeciloma* Baird, Rev. Amer. Bds., 1, p. 292, 1865—Spanish-town, Jamaica (crit.).

*Petrochelidon fulva fulva* Peters, Bull. Mus. Comp. Zool., 61, p. 418, 1917—Monte Cristi and San Juan, Dominican Republic; Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 507, 1928—Haiti, Gonave, and Tortuga; Danforth, Auk, 46, p. 371, 1929—Santo Domingo City, Citadelle, and Gonave; Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 320, 1929—San Juan, Sabana San Thomé; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 319, 1931—Hispaniola (monog., habits).

*Petrochelidon fulva poeciloma* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 55, 1904—Jamaica and Porto Rico (monog.); Wetmore, Bull. U. S. Dept. Agric., 326, p. 85, 1916—Porto Rico (habits); Struthers, Auk, 40, p. 475, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 111, 1926—Cartagena Lagoon, Porto Rico; idem, Auk, 45, p. 488, 1928—Lumsden, Jamaica; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 474, 1927—Porto Rico (crit., habits).

*Range*.—Islands of Jamaica, Haiti (including Gonave and Tortue), and Porto Rico, Greater Antilles;<sup>1</sup> (?) coast of Yucatan (Chichen Itza, Izamal).<sup>2</sup>

42: Jamaica, 20; Santo Domingo (Santo Domingo City, 15); Haiti (Gonaives, 1); Porto Rico (Mayagüez, 6).

### *Petrochelidon fulva coronata* (Lembeye).<sup>3</sup> CUBAN CLIFF SWALLOW.

*Hirundo coronata* Lembeye,<sup>4</sup> Aves Isl. Cuba, p. 45, 1850—Cafetal Fundador, Rio Canimar, Cuba (type in coll. of J. Gundlach); Gundlach, Journ. Bost. Soc. N. H., 6, p. 318, 1852—Cuba (eggs descr.).

<sup>1</sup> I fail to detect the slightest difference between specimens from Haiti (*fulva*), Jamaica (*poeciloma*), and Porto Rico. Both Baird and Ridgway separated the Jamaican birds from those of Cuba, which they believed to represent *P. f. fulva*, but, although *P. f. poeciloma* has of late been generally recognized, nobody ever stated how this form can be distinguished from typical *fulva*, of the island of Haiti.

<sup>2</sup> A Cliff Swallow of this group is reported by Boucard and Gaumer to be resident in northern Yucatan. While Salvin and Godman (l.c.) claim a single specimen from there to be similar to Cuban birds, Ridgway refers four skins to "*P. f. poeciloma*" of Jamaica, from which they are stated to differ only by smaller size. Considering this divergency of opinion, it seems that the status of the Yucatan form requires further investigation with the help of adequate series. The record of a Cliff Swallow from Panama is extremely doubtful.

<sup>3</sup> *Petrochelidon fulva coronata* (Lembeye): Exceedingly similar to *P. f. fulva*, but the chestnut area of the rump decidedly more extensive. The amount of rufous on the under surface, upon which Barbour and Brooks laid so much stress for the discrimination of the Cuban form, is subject to great individual variation, and does not hold when an adequate series of typical *fulva* is compared. Six specimens from Cuba examined.

<sup>4</sup> *Hirundo coronata* Lembeye, described from Gundlach's manuscript, is the earliest name for the Cuban Swallow and supersedes *P. f. caricola*, since *Hirundo coronata* Lichtenstein (Preis-Verz. Säug., Vögel, etc., Mexico, p. 3, 1830) proves to be a nomen nudum without nomenclatorial standing.

*Petrochelidon fulva caricola* Barbour and Brooks, Proc. New Engl. Zool. Cl., 6, p. 52, 1917—San Antonio de los Baños, Province of Havana, Cuba (type in Museum of Comparative Zoology, Cambridge, Mass.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 110, 1923—Cuba (habits).

*Petrochelidon fulva* (not *Hirundo fulva* Vieillot) Gundlach, Journ. Orn., 4, p. 3, 1856; l.c., 20, p. 432, 1872; l.c., 22, p. 113, 1874—Cuba (habits); Baird, Rev. Amer. Bds., 1, p. 291, 1865—Cuba (crit., excl. hab. Santo Domingo); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 228, 1883—part, Cuba; Sharpe, Cat. Bds. Brit. Mus., 10, p. 196, 1885—part, Cuba; Sharpe and Wyatt, Monog. Hirund., 2, p. 561, 1887—part, Cuba; Scott, Auk, 7, p. 264, 1890—Garden Key, Dry Tortugas, Florida (March 20 and 25, 1890); Chapman, Bull. Amer. Mus. N. H., 4, p. 309, 1892—San Juan and San Pablo, Cuba.

*Petrochelidon fulva fulva* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 53, 1904—Cuba and Isle of Pines (excl. Haiti); Bangs and Zappey, Amer. Natur., 39, p. 209, 1905—Nueva Gerona, Isle of Pines; Todd, Ann. Carnegie Mus., 10, p. 259, 1916—Bibijagua and Nueva Gerona, Isle of Pines (habits).

**Range.**—Island of Cuba, including the Isle of Pines, Greater Antilles; accidental on Garden Key, Dry Tortugas, Florida (March 22 and 25, 1890).

**\**Petrochelidon fulva pallida* Nelson. COAHUILA CLIFF SWALLOW.**

*Petrochelidon fulva pallida* Nelson, Proc. Biol. Soc. Wash., 15, p. 211, 1902—Saltillo, Coahuila, Mexico (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 56, 1904—northeastern Mexico (Coahuila and Tamaulipas); Bishop, Auk, 27, p. 459, 1910—Kerrville, Texas; Thayer, Auk, 31, p. 401, 1914—Kerr County, Texas; idem, Auk, 32, p. 102, 1915—Japonica, Kerr County, Texas (nest and eggs); Smith, Auk, 33, p. 191, 1916—six miles west of Ingram, Texas.

**Range.**—Northeastern Mexico, in states of Tamaulipas (Miquihuana) and Coahuila (Saltillo), north to Kerr County, western Texas.

2: Texas (Kerrville, 2).

***Petrochelidon fulva rufocollaris* (Peale).<sup>1</sup> PERUVIAN CLIFF SWALLOW.**

*Hirundo rufocollaris* Peale, U. S. Expl. Exp., 8, p. 175, 1848—near Callao, Peru (type in U. S. National Museum).

<sup>1</sup> *Petrochelidon fulva rufocollaris* (Peale), in spite of its widely separated habitat, is clearly conspecific with the West Indian and Mexican Cliff Swallows. Its principal characters are the reduction of the bright rufous area on the forepart of the crown to a dull chestnut brown frontal band; the white (or at best slightly buff-tinged) color of the throat, cheeks, and auriculars; the deeper bluish black crown; and the darker, auburn to chestnut (instead of orange-cinnamon to tawny) tone of the prepectoral band and streaking of the sides. The axillaries and under wing coverts are generally more grayish brown, less tinged with ochraceous. Wing, 99–102; tail, 47–51.

**Material examined.**—Peru: Lima, 5; Huaral, 3.

*Petrochelidon ruficollaris* Baird, Rev. Amer. Bds., 1, p. 292, 1865—Callao (note on type); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 196, 636, pl. 3, 1885—Lima; Taczanowski, Orn. Pér., 3, p. 503, 1886—Lima; Sharpe and Wyatt, Monog. Hirund., 2, p. 567, pl. 108, 1887—Lima; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Lima.

*Petrochelidon ruficollis* (lapsus) Nation, Proc. Zool. Soc. Lond., 1885, p. 277—vicinity of Lima (nesting habits).

*Range*.—Western Peru, in the vicinity of Lima (Callao, Lima, Vitarte, Huaral).

***Petrochelidon fulva aequatorialis* Chapman.<sup>1</sup> ECUADORIAN CLIFF SWALLOW.**

*Petrochelidon rufocollaris aequatorialis* Chapman, Amer. Mus. Nov., 138, p. 12, 1924—Alamor, Prov. Loja, Ecuador (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 558, 1926—Alamor, Guainche, and Pullango, Ecuador.

*Range*.—Southwestern Ecuador, in Province of Loja (Alamor, Guainche, Pullango).

***Petrochelidon andecola andecola* (Lafresnaye and d'Orbigny).<sup>2</sup> ANDEAN SWALLOW.**

<sup>1</sup> *Petrochelidon fulva aequatorialis* Chapman: Very close to *P. f. rufocollaris*, but slightly smaller; prepectoral band and sides of the body more extensively and deeper chestnut; throat and auriculars washed with tawny. Wing, 91–97; tail, 46–48.

Only one of the two specimens before me differs from eight Peruvian skins by having the rufous of the lower parts more extended as well as decidedly deeper chestnut, and the throat (medially) and the auriculars tinged with tawny, thereby approaching *P. f. fulva*. The other example (from Alamor) can be matched, except in size, by various individuals from Peru. I must confess I am not quite convinced of its validity as a race.

*Material examined*.—Ecuador: Alamor, 1; Guainche, 1.

<sup>2</sup> *Petrochelidon andecola andecola* (Lafresnaye and d'Orbigny) is a very distinct species, differing from the other members of the genus by the absence of rufous in its plumage and by the lack of the whitish edges to the dorsal feathers, but aside from its larger dimensions and slightly wider rectrices I fail to find any structural character to separate it generically (*Haplochelidon* Todd). In coloration of upper parts it is not unlike *Orochelidon murina*, though the metallic gloss on pileum and back is bottle green rather than steel blue, while the upper tail coverts are hair brown with hardly a trace of greenish sheen. The two species are, however, quite different underneath, *P. a. andecola* having only the throat light hair brown in strong contrast to the buffy white breast and abdomen, and the under tail coverts, at least the longer ones, grayish brown or dusky, apically margined with whitish; whereas in *Orochelidon murina* the whole under surface is dark brown (between drab and hair brown) with broad glossy metallic blue tips to the tail coverts. Besides, *P. andecola* has a much larger bill, and the tail, composed of wider, bluntly rounded feathers, is much less forked, while the under tail coverts are much longer, reaching to within 11 to 15 mm. from the tip of the tail. Sharpe, curiously, regarded the present species as juvenile plumage of *Orochelidon murina*.

*Material examined*.—Bolivia: La Paz, 1 (the type); Chililaya, Lake Titicaca, 2.—Peru: Arequipa, 2 (females, May 31, 1867. H. Whitely); Tinta, 1 (Feb. 13, 1869. H. Whitely).—Chile: Sacaya, Tarapacá, 1 (female, April 2, 1890. A. A. Lane).

*Hirundo andecola* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 69, 1837—"in Andibus, La Paz (Bolivia)" (type in Paris Museum examined).

*Hirundo andicola* Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 984—Arequipa, Peru (crit.; spec. examined); idem, l.c., 1869, p. 151—Tinta, Cuzco, Peru (spec. examined); Allen, Bull. Mus. Comp. Zool., 3, p. 353, 1876—Moho, Lake Titicaca, Dept. Puno, Peru; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—La Paz, Bolivia (ex d'Orbigny).

*Atticora andecola* Berlepsch and Stolzmann, Ornith., 13, p. 126, 1906—Puno, Peru.

*Orochelidon andecola* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 10, 1920 (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 101, 1921—La Raya, southern Peru.

*Haplochelidon andecola andecola* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 47, 1932—Sacaya, Tarapacá, Chile (crit.).

*Atticora cinerea* (not *Hirundo cinerea* Gmelin) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 184, 634, 1885—part, descr. "young" and spec. i, k, o, Tinta and Arequipa, Peru (spec. examined); Sharpe and Wyatt, Monog. Hirund., 2, p. 499, pl. 96, left fig., 1892 (monog., part, descr. of "young"); Sclater, Proc. Zool. Soc. Lond., 1891, p. 132—Sacaya, Tarapacá, Chile (spec. examined).

**Range.**—Puna zone of southern Peru (in depts. of Arequipa, Cuzco, and Puno), extreme northern Chile (Tarapacá), and Bolivia (depts. of La Paz and Cochabamba).

### ***Petrochelidon andecola oroyae* Chapman.<sup>1</sup> OROYA SWALLOW.**

*Petrochelidon andecola oroyae* Chapman, Amer. Mus. Nov., 138, p. 12, Oct., 1924—Oroya, Dept. Junín, Peru (type in the American Museum of Natural History, New York).

*Hirundo andecola* (not of Lafresnaye and d'Orbigny) Tschudi, Arch. Naturg., 10, (1), p. 269, 1844—Peru; idem, Unters. Faun. Peru., Aves, p. 132, 1846—Sierra of Peru; Taczanowski, Orn. Pér., 1, p. 242, 1884—between Cucas and Palcamayo.

*Hirundo andicola* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—between Cucas and Palcamayo, Junín.

*Atticora andecola* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 333—Queta, near Tarma, Dept. Junín (crit.).

<sup>1</sup> *Petrochelidon andecola oroyae* Chapman: Very similar to *P. a. andecola*, but perhaps distinguishable by larger bill and more bluish reflections on pileum and back. Wing, 123, (female) 116; tail, 60, (female) 55; bill, 7½.

With only two specimens for comparison it is hardly possible to pass a definite judgment on the merits of this form. I notice, however, that the male is just as green-glossed above as any typical *andecola*, while the female shows decidedly bluish reflections. The color of the shafts of the primaries does not seem to be of much importance, it being very nearly whitish in one specimen from Bolivia and in another from Arequipa.

**Material examined.**—Peru, Junín: Queta, near Tarma, 2.

*Range*.—Puna zone of central Peru, in Dept. of Junín (Oroya; Chipa; Queta, near Tarma; between Cucas and Palcamayo).

### Genus STELGIDOPTERYX Baird

*Stelgidopteryx* Baird, in Baird, Cassin, and Lawrence, Rep. Expl. Surv. R. R. Pac., 9, p. 312, 1858—type, by monotypy, *Hirundo serripennis* Audubon.

#### \**Stelgidopteryx ruficollis ruficollis* (Vieillot). RUFOUS-THROATED ROUGH-WINGED SWALLOW.

*Hirundo ruficollis* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 523, 1817—"Brésil," coll. Delalande, Jr.=vicinity of Rio de Janeiro (type in Paris Museum; cf. Pucheran, Rev. Mag. Zool., (2), 5, p. 442, 1853).

*Hirundo flavigastra* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 534, 1817—based on "Golondrina vientre amarillazo" Azara, No. 306, Paraguay (excl. variety);<sup>1</sup> Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 69, 1837—Corrientes (spec. examined).

*Hirundo jugularis* Wied, Reise Bras., 1, p. 345 (8vo ed., p. 342), 1820—Cachoeirinha, Rio Grande de Belmonte, Bahia, Brazil (type in Wied Collection, now in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 217, 1889); Temminck, Nouv. Rec. Pl. Col., livr. 27, pl. 161, fig. 2, 1822—Brazil; Wied, Beitr. Naturg. Bras., 3, (1), p. 365, 1830—eastern Brazil.

*Hirundo hortensis* Lichtenstein, Verz. Doubl. Berliner Mus., p. 57, 1823—Bahia (type in Berlin Museum).

*Hirundo flaviventer* Lesson, Traité d'Orn., livr. 4, p. 269, Sept., 1830—"Brésil (Delalande)"=Rio de Janeiro (type in Paris Museum; cf. Pucheran, Rev. Mag. Zool., (2), 5, p. 444, 1853 (crit.)).

*Cotyle flavigastra* Burmeister, Syst. Uebers. Th. Bras., 3, p. 144, 1856—Congonhas, Minas Geraes; Pelzeln, Orn. Bras., 1, p. 17, 1868—Rio de Janeiro, São Paulo (Casa Pintada, Ypanema), and Matto Grosso (Cuyabá, Caiçara).

*Cotyle ruficollis* Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 439—Minas Geraes (Lagôa Santa) and São Paulo (Hytú); Berlepsch, Journ. Orn., 21, p. 235, 1873—Blumenau, Santa Catharina.

*Cotile ruficollis* Barrows, Bull. Nutt. Orn. Cl., 8, p. 90, 1883—Concepción del Uruguay, Entre Rios (nesting habits).

*Stelgidopteryx ruficollis* Baird, Rev. Amer. Bds., 1, p. 315, 1865—"La Plata" region and Brazil (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 178—upper and lower Ucayali, Peru; idem, l.c., 1867, p. 749—Yurimaguas, Peru; idem, l.c., 1873, p. 185—Cosnipata, Peru; idem, l.c., 1873, p. 259—Ucayali and Yurimaguas, Peru (nest and eggs descr.); Layard, Ibis, 1873, p. 377—Pará (spec. examined); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—Monterico, Peru; Sclater and Salvin, l.c., 1879,

<sup>1</sup> This variety, of which Azara states having seen but one example, appears to be *Alopocheidon fucatus* (Temminck).

p. 596—Yuyo, Bolivia; Forbes, Ibis, 1881, p. 330—Recife and Parahyba inland to Macuca, Pernambuco; Taczanowski, Orn. Pér., 1, p. 246, 1884—Peruvian localities; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 117, 1885—Linja Pirajá, Rio Grande do Sul; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 208, 636, 1885—part, spec. a-m, p-z, Ucayali, Yurimaguas, Iquitos, Pará, Rio Pernambuco, Bahia, Yuyo, and Rio Napo; Sharpe and Wyatt, Monog. Hirund., 2, p. 647, pl. 126 (left fig.), 1888—part, Bahia, Pará, Rio de Janeiro, Iquitos, Ucayali, Yurimaguas, Copataza River, Rio Napo, Yuyo; Sclater and Hudson, Arg. Orn., 1, p. 36, 1888—Entre Rios; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—La Merced, Chanchamayo, Peru; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 11, 1899—Rio Zamora, eastern Ecuador; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 118, 1899—Linja Pirajá and Pedras Brancas, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 140, 1899—Piquete, Iguapé, and São Sebastião, São Paulo; idem, l.c., 4, p. 152, 1900—Cantagallo, Rio de Janeiro; Goodfellow, Ibis, 1901, p. 316—Archidona, Ecuador; Goeldi, Ibis, 1903, p. 499—Rio Capim, Pará; Bruch, Rev. Mus. La Plata, 11, p. 256, 1904—Orán, Salta, Argentina; Ihering, Cat. Faun. Braz., 1, p. 342, 1907—São Paulo (Iguapé, Piquete, Cachoeira, Jundiahy) and Minas Geraes (Vargem Alegre); Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 77, 1910—Pernambuco (Beberibé, near Recife), Bahia (Boa Vista and Lagôa de Boqueirão, Rio Grande), and Piauhys (Santo Antonio de Gilboez); Grant, Ibis, 1911, p. 92—Rabicho, Matto Grosso, and Colonia Mihanovitch, Formosa; Snethlage, Bol. Mus. Goeldi, 8, p. 472, 1914—part, Pará, Maguary, Apehy, Peixe-Boi, Rio Capim (Resacca), Rio Xingú (Victoria), Rio Jamauchim (Conceição), and Rio Tapajóz (Boim); Bertoni, Faun. Parag., p. 61, 1914—Alto Paraná, Paraguay; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—Anil and Tury-assú, Maranhão.

*Stelgidopteryx ruficollis ruficollis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 58, 1901 (char., range); Hellmayr, Nov. Zool., 13, p. 13, 1906—Brazil north to Pará, west to Peru and Ecuador (crit.); idem, l.c., 15, p. 25, 1908—Goyaz (crit.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 354, 1910—Entre Rios, Misiones (Posadas), Salta (Orán), and "Catamarca" (errore); Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Pará and Rio Capim, Pará; Dabbene, Bol. Soc. Physis, 1, p. 351, 1914 (range in Argentina); Chapman, Bull. Amer. Mus. N. H., 36, p. 505, 1917—La Morelia, Caquetá, Colombia; Beebe, Zoologica (N.Y.), 2, p. 103, 1916—Utinga, Pará; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 10, 1920—Chaquimayo, Carabaya, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 102, 1921—below San Miguel Bridge, Urubamba, Peru; idem, Bull. Amer. Mus. N. H., 55, p. 559, 1926—Zamora and Rio Suno, eastern Ecuador; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 171, 1928—Pará; Holt, Bull. Amer. Mus. N. H., 57, p. 312, 1928—Monte Serrat, Itatiaya; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 266, 1929—Tranqueira, Maranhão; Zimmer, l.c., 17, p. 399, 1930—Rio Colorado, Chanchamayo, Peru (crit.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 319, 1930—Descalvados and Tapirapoan, Matto Grosso, and Calama, Rio Madeira.



*Stelgidopteryx uropygialis* (not *Cotyle uropygialis* Lawrence) Ihering, Cat. Faun. Braz., 1, p. 342, 1907—"Bahia."<sup>1</sup>

(?) *Stelgidopteryx ruficollis uropygialis* Bangs and Noble, Auk, 35, p. 458, 1918—Bellavista, Rio Marañón, Peru.

**Range.**—Extreme northern and eastern Argentina, in provinces of Salta (Orán), Jujuy (Ledesma), Formosa (Colonia Mihanovitch), Entre Ríos (Concepción del Uruguay), Corrientes, and Misiones (Posadas); Paraguay; eastern Bolivia (Yuyo); Brazil, north to the Amazon; eastern Peru; and north through eastern Ecuador to southeastern Colombia (La Morelia, Caquetá).<sup>2</sup>

17: Brazil (Tranqueira, Maranhão, 1; São Marcello, Rio Preto, Bahia, 8; Piraputanga, Matto Grosso, 1); Peru (Rioja, 1; Moyobamba, 4; Rio Colorado, Chanchamayo, 1; San Ramón, Chanchamayo, 1).

**\**Stelgidopteryx ruficollis cacabatus* Bangs and Penard.<sup>3</sup>**  
**GUIANAN ROUGH-WINGED SWALLOW.**

<sup>1</sup> The occurrence of *S. uropygialis* in Brazil rests upon a specimen supposed to be from "Bahia" in the British Museum (spec. i). This example, which we have carefully examined, pertains to *S. r. aequalis*, but it certainly never came from Bahia, having the characteristic preparation of the skins imported from Cartagena and Barranquilla, in northern Colombia.

<sup>2</sup> Birds from eastern Peru and eastern Ecuador appear to me inseparable from Brazilian skins. A single specimen from Pará likewise resembles the average from Bahia and Rio de Janeiro, while one from Jujuy is among the palest in the whole series examined, so far as the upper parts are concerned.

**Additional specimens examined.**—Paraguay: San Luis de la Sierra, Apa Highlands, 3.—Argentina: Ledesma, Jujuy, 1.—Brazil: Caiçara, Matto Grosso, 2; Puerto Sastre, Rio Paraguay, 1; São Sebastião, São Paulo, 1; Casa Pintada, São Paulo, 2; Rio de Janeiro, 5; Bahia, 3; Rio Grande, Bahia, 3; Beberibé, Pernambuco, 1; Santo Antonio de Gilboez, Piauh, 1; Pará, 1.—Peru: Chaquimayo, Carabaya, 2; La Aroya, Inambari Val, 1; Chanchamayo, 1; Nauta, 2.—Ecuador: Archidona, 3.

<sup>3</sup> *Stelgidopteryx ruficollis cacabatus* Bangs and Penard: Similar to *S. r. ruficollis* in having the lower rump concolor with the back, but upper parts including wings and tail darker, fuscous rather than hair brown; chest and sides also slightly darker; size perhaps on average smaller.

With the limited material at my command, I am hardly in the position to pass a definite judgment on the merits of this form. A topotype from near Paramaribo and a single trade skin from Cayenne, while decidedly darker than the great majority in a considerable series of *ruficollis*, can very nearly be matched by certain individuals, notably one from Pernambuco (Beberibé, near Recife) and one from Chanchamayo, Peru. Birds from Roraima are doubtful. The five specimens now before me, all collected by H. Whitely in the early eighties, are appreciably paler and browner above than any other example from South America and have the rump buffy brown, these peculiarities having already been noticed by Sharpe (1888). Chapman, however, in discussing recently collected material from Roraima, describes the upper parts as being as dark as in *ruficollis*, which leads me to believe that the coloration of the Whitely skins must have undergone some post-mortem change. I concur with Dr. Chapman that the Roraima birds, which I had formerly referred to *S. r. aequalis*, cannot well be united to that form, although by their somewhat lighter rump they mark a certain approach in their direction.

**Material examined.**—French Guiana: Cayenne, 1.—Dutch Guiana: near Paramaribo, 1.—British Guiana: Roraima, 5.

*Stelgidopteryx ruficollis cacabatus* Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 83, 1918—vicinity of Paramaribo, Surinam (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Cotyle ruficollis* (not *Hirundo ruficollis* Vieillot) Sclater, Cat. Coll. Amer. Bds., p. 41, 1862—part, spec. e, Cayenne.

*Stelgidopteryx ruficollis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 208, 1885—part, spec. n, Cayenne; Salvin, Ibis, 1885, p. 206—Roraima; Sharpe and Wyatt, Monog. Hirund., 2, p. 647, pl. 126 (right fig.), 1888—part, Cayenne and Roraima; Berlepsch, Nov. Zool., 15, p. 110, 1908—Cayenne; Penard and Penard, Vog. Guyana, 2, p. 506, 1910—Surinam; (?) Snethlage, Bol. Mus. Goeldi, 8, p. 472, 1914—part, Rio Maecurú, Brazil.

*Stelgidopteryx ruficollis aequalis* (not of Bangs) Hellmayr, Nov. Zool., 13, p. 13, 1906—part, Roraima.

*Stelgidopteryx aequalis* Chubb, Bds. Brit. Guiana, 2, p. 350, 1921—Roraima and upper Takutu Mountains.

*Stelgidopteryx uropygialis* (not *Cotyle uropygialis* Lawrence) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 209, 637, 1885—part, spec. g, h, q-v, Roraima and Cayenne; Penard and Penard, Vog. Guyana, 2, p. 507, 1910—Surinam.

*Stelgidopteryx ruficollis ruficollis* Chapman, Bull. Amer. Mus. N. H., 63, p. 105, 1931—Arabupu, Roraima (crit.).

**Range.**—French, Dutch, and British Guiana, possibly extending south to the north bank of the Amazon, Brazil (Rio Maecurú).

1: Dutch Guiana (vicinity of Paramaribo, 1).

**\**Stelgidopteryx ruficollis aequalis* Bangs.<sup>1</sup> CARIBBEAN ROUGH-WINGED SWALLOW.**

*Stelgidopteryx ruficollis aequalis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 58, 1901—Santa Marta, Colombia (type in collection of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 292, 1930); Hellmayr, Nov. Zool., 13, p. 13, 1906—Laventille, Chaguaramas, Caroni, and Cangrejal, Trinidad (crit., range excl. Roraima); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 357, 1908—Aripo and Carenage, Trinidad; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 206, 1913—Marimo River, Orinoco Delta; Cherrie, Sci.

<sup>1</sup> *Stelgidopteryx ruficollis aequalis* Bangs: Nearest to *S. r. uropygialis* in having the lower rump pale grayish brown or dull whitish, in strong contrast to the much darker color of the back; but throat paler rufous, and chest and sides conspicuously paler brownish gray.

Birds from Santa Marta, Venezuela, and Trinidad agree well together. Two from the Caura Valley (La Pricion and Maripa) are typically pale-rumped individuals of this form, showing no approach to *S. r. cacabatus*, and so are several skins from the Magdalena Valley. Intermediates between *aequalis* and *uropygialis* occur, however, according to Chapman, in the lower Cauca Valley and on the Rio Sucio, in western Colombia.

**Additional material examined.**—Trinidad: Carenage, 4; Caparo, 7; Chaguanas, 1; Laventille, 1; Chaguaramas, 1; Caroni, 1; Cangrejal, 1.—Venezuela: Guiría, Paria Peninsula, 1; Cumanacoa, Sucre, 5; Maripa, Caura, 1; La Pricion, Caura, 1; Caicara, Orinoco, 4; Mérida, 2.—Colombia: "Bogotá," 3; Bucaramanga, 1; Santa Marta, 2; Cartagena, 3.

Bull., Mus. Brookl. Inst., 2, p. 160, 1916—middle and lower Orinoco; Chapman, Bull. Amer. Mus. N. H., 36, p. 505, 1917—Dabeiba (Rio Sucio), Puerto Valdivia and Rio Frio (Cauca Valley), Calamar, Varrud, Banco, Puerto Berrio, Malena, and Chicoral (Magdalena Valley), Andaluca, and Villavicencio, Colombia (crit.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 437, 1922—Bonda, Santa Marta, Don Diego, Tucurinca, and Fundación, Santa Marta, Colombia (nest and eggs); Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1930—Rio Frio, Magdalena.

*Cotyle flavigastra* (not *Hirundo flavigastra* Vieillot) Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 133—part, Cartagena.

*Cotyle uropygialis* (not of Lawrence) Léotaud, Ois. Trinidad, p. 94, 1866—Trinidad.

*Stelgidopteryx uropygialis* Wyatt, Ibis, 1871, p. 323—Ocaña and Bucaramanga; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Remedios, Antioquia; Berlepsch, Journ. Orn., 32, p. 285, 1884—Bucaramanga, Colombia; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 209, 637, 1885—part, spec. f, o, p, Venezuela, Bogotá, and Santa Elena, Colombia; Sharpe and Wyatt, Monog. Hirund., 2, p. 651, pl. 127 (fig. of adult from Ocaña), 1889—part, Venezuela and Colombia (Bogotá, Ocaña, Remedios, Santa Elena); Chapman, Bull. Amer. Mus. N. H., 6, p. 28, 1894—Trinidad; Phelps, Auk, 14, p. 364, 1897—Cumanacoa and San Antonio, Sucre, Venezuela; Bangs, Proc. Biol. Soc. Wash., 12, p. 142, 1898—Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 171, 1900—Bonda, Santa Marta; Williams, Bull. Dept. Agric. Trin. and Tobago, 20, p. 129, 1922—Williamsville and Harmony Hall, Trinidad (food).

*Stelgidopteryx ruficollis uropygialis* Berlepsch and Hartert, Nov. Zool., 9, p. 15, 1902—Caicara and Altagracia, Orinoco, and La Pricion, Caura, Venezuela; Lowe, Ibis, 1909, p. 322—Cariaco, Venezuela.

*Stelgidopteryx ruficollis* (not *Hirundo ruficollis* Vieillot) Sharpe, Cat. Bds. Brit. Mus., 10, p. 208, 1885—part, spec. o, Caracas, Venezuela.

*Range*.—Trinidad; northern Venezuela south to the Orinoco Valley and its tributaries; Colombia, from the Caribbean coast south to the lower Cauca, throughout the Magdalena Valley, and through the eastern Andes to Villavicencio.

12: Colombia (Fundación, 1; Puerto Berrio, Magdalena, 1; Andaluca, Huila, 1; "Bogotá," 1); Venezuela (Orope, Zulia, 1; Colón, Tachira, 2; Maracay, Aragua, 1; Macuto, Caracas, 4).

**\**Stelgidopteryx ruficollis uropygialis* (Lawrence). PANAMA  
ROUGH-WINGED SWALLOW.**

*Cotyle uropygialis* Lawrence, Ibis, 5, p. 181, 1863—Panama (type in collection of Geo. N. Lawrence, now in the American Museum of Natural History, New York); idem, Ann. Lyc. Nat. Hist. N. Y., 8, p. 3, 1863—Panama; Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Isthmus of Panama (crit.); Sclater and Salvin, I.c., 1867, p. 278—Bluefields River, Nicaragua.

*Cotyle flavigaster* (not *Hirundo flavigaster* Vieillot) Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 133—part, Rio Truando, Colombia; Sclater, Proc. Zool. Soc. Lond., 28, p. 274, 1860—Babahoyo, Ecuador; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 317, 1862—Panama Railroad.

*Cotyle ruficollis* (not *Hirundo ruficollis* Vieillot) Sclater, Proc. Zool. Soc. Lond., 28, p. 292, 1860—Esmeraldas, Ecuador.

*Stelgidopteryx uropygialis* Baird, Rev. Amer. Bds., 1, p. 317, 1865—Isthmus of Darien and Panama (crit.); Salvin, Ibis, 1870, p. 109—Costa Rica; Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 744—Lechugal, near Tumbes, Peru; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 238, 1883—part, Costa Rica (Angostura), Panama (railroad line, Obispo Station), and Rio Truando; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo, Ecuador; idem, l.c., 1884, p. 75—Yaguachi, Ecuador; Taczanowski, Orn. Pér., 1, p. 247, 1884—Lechugal and Paucal, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 209, 637, 1885—part, spec. a-e, j, m, n, Panama, Esmeraldas, and Babahoyo; Sharpe and Wyatt, Monog. Hirund., 2, p. 651, pl. 127 (fig. of young), 1889—part, Costa Rica, Panama, western Ecuador, and western Peru; Richmond, Proc. U. S. Nat. Mus., 16, p. 486, 1893—Rio Frio, Costa Rica; Hartert, Nov. Zool., 5, p. 480, 1898—Cachabí and Chimbo, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, pl. 11, 1899—Vinces, Ecuador; Bangs, Proc. New Engl. Zool. Cl., 2, p. 26, 1900—Loma del León, Panama.

*Stelgidopteryx ruficollis uropygialis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 59, 1901—part, Panama and Costa Rica (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 63, 1904—Nicaragua to western Ecuador (excl. Venezuela and Trinidad); Hellmayr, Nov. Zool., 13, p. 13, 1906—Costa Rica to western Ecuador (crit., excl. Chiriquí); Carriker, Ann. Carnegie Mus., 6, p. 790, 1910—Costa Rica (in part); Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1093—Sipí, western Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 506, 1917—Juntas de Tamaná, Növita, San José, Caldas, Las Lomitas, Barbacoas, Buenavista (Nariño), La Frijolera, Barro Blanco, Salento, and Rio Toché, Colombia (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 291, 1918—Gatun, Panama; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 224, 1922—Jesusito, Darien; Chapman, Bull. Amer. Mus. N. H., 55, p. 559, 1926—Esmeraldas, Daule, Duran, Naranjo, Bucay, Rio Jubones, Santa Rosa, Casanga, and Rio Pullango, Ecuador; Griscom, Proc. New Engl. Zool. Cl., 11, p. 69, 1929—southeastern Nicaragua to western Ecuador (crit.); idem, Bull. Mus. Comp. Zool., 69, p. 181, 1929—Cana, Darien; Peters, l.c., 71, p. 330, 1931—Crimacola, Panama; Griscom, l.c., 72, p. 358, 1932—Permé, Panama; Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 4, p. 234, 1932—Isla Silva, Ecuador.

*Stelgidopteryx fulvigula* Baird, Rev. Amer. Bds., 1, p. 318, 1865—Angostura, Costa Rica (=juv.; type in U. S. National Museum); Salvin, Ibis, 1874, p. 307 (crit.).

**Range.**—Chiefly Tropical zone of southern Central America, from eastern Costa Rica south through Panama to western Colombia

(extending east, according to Chapman, to the Subtropical zone of the central Andes), western Ecuador, and northwestern Peru (Tumbez; Paucal).<sup>1</sup>

9: Costa Rica (Siquirres, 1); Panama (Colon, 2; between Frijoles and Darien, 1); Colombia (San José, 1; Buenavista, Nariño, 1); Ecuador (Pambilár, Prov. Esmeraldas, 2; Puente de Chimbo, 1).

**\**Stelgidopteryx ruficollis decolor* Griscom.<sup>2</sup> CHIRIQUÍ ROUGH-WINGED SWALLOW.**

*Stelgidopteryx ruficollis decolor* Griscom, Proc. New Engl. Zool. Cl., 11, p. 69, 1929—Divala, Chiriquí, Panama (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Stelgidopteryx uropygialis* (not *Cotyla uropygialis* Lawrence) Salvin, Proc. Zool. Soc. Lond., 1870, p. 184—Chitrá, Veragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 238, 1883—part, Chitrá; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 209, 637, 1885—part, spec. 1, Chitrá; Sharpe and Wyatt, Monog. Hirund., 2, p. 651, 1889—part, Chitrá, "Chiriquí."

*Stelgidopteryx ruficollis uropygialis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 59, 1901—part, Chiriquí; idem, Auk, 18, p. 368, 1901—Divala, Chiriquí (crit.); idem, Auk, 24, p. 305, 1907—Pózo del Rio Grande, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 790, 1910—part, Pózo Azul de Pirrís and El General de Térraba, Costa Rica.

*Stelgidopteryx salvini* (not of Ridgway, 1903) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 62, 1904—part, Divala, Chiriquí.

<sup>1</sup> Series from Pacific Colombia and western Ecuador agree perfectly with birds from Panama Canal Zone. The Siquirres specimen merely differs by its slightly paler cinnameous throat.

*Additional material examined.*—Panama: Colón, 3.—Colombia: Sipí, 3; Rio Dagua, 2.—Ecuador: Rio Cayápas, 2; Carondelet, 2; San Javier, 1; Paramba (alt. 3,500 ft.), 1.

<sup>2</sup> *Stelgidopteryx ruficollis decolor* Griscom: Very near to *S. r. uropygialis*, but slightly paler brown above, with the pileum less blackish; rump as a rule nearly concolor with, or only little paler than, the back, but sometimes fully as whitish as in *uropygialis*; throat frequently paler cinnameous; middle of belly less tinged with yellowish; under tail coverts sometimes unspotted. Wing (males), 110–113.

This is a very unstable form, consisting of intergrades of varying degree between *uropygialis* and *fulvipennis* and its recognition in nomenclature appears to be highly disputable. Of five birds from Chiriquí (Bugaba), two are hardly distinguishable from Panama examples of *uropygialis*, having a distinct whitish brown uropygial area, bright cinnameous throat, yellowish abdominal line, and long blackish tips to the under tail coverts. Two others, which have the rump brown like the back, the throat faintly tinged with pale vinaceous-buff, and the abdominal line as well as the unspotted under tail coverts nearly white, cannot be told apart from *fulvipennis*. The fifth specimen is exactly halfway between the two other sets. Similar conditions exist in the Térraba Valley of Costa Rica. Cf. also Bangs, Proc. Biol. Soc. Wash., 19, p. 110, 1906.

*Material examined.*—Panama: Bugaba, Chiriquí, 5.—Costa Rica: Punta Mala, 1; El Pózo de Rio Térraba, 1; Pózo Azul de Pirrís, 3.

*Range*.—Pacific slope of Central America, from Veraguas (Chitrá) to the Térraba Valley in extreme southern Costa Rica.

2: Costa Rica (Punta Mala, delta of the Rio Diquís, Térraba district, 1; El Pózo, Rio Térraba, 1).

**\**Stelgidopteryx ruficollis fulvipennis* (Sclater).<sup>1</sup> SALVIN'S  
ROUGH-WINGED SWALLOW.**

*Cotyle fulvipennis* Sclater, Proc. Zool. Soc. Lond., 27, p. 364, 1859—Jalapa, Vera Cruz, Mexico (type in collection of P. L. Sclater, now in British Museum; = young); Sclater and Salvin, Ibis, 1860, p. 31—Dueñas, Guatemala.

*Stelgidopteryx salvini* Ridgway, Proc. Biol. Soc. Wash., 16, p. 107, 1903—Dueñas, Guatemala (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 62, 1904—southwestern Mexico (La Barca, Jalisco) to Guatemala (Dueñas) (monog., excl. Divala, Chiriquí); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 273, 1910—Guayábo, Costa Rica.

*Stelgidopteryx fulvipennis* Baird, Rev. Amer. Bds., 1, p. 316, 1865—part, Dueñas, Guatemala (crit.); Boucard, Proc. Zool. Soc. Lond., 1878, p. 67—San José, Costa Rica (spec., now in Munich Museum, examined).

*Stelgidopteryx fulvigula* (not of Baird) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 96, 1868—Atirro, Costa Rica; Frantz, Journ. Orn., 17, p. 295, 1869—Costa Rica; Salvin, Ibis, 1870, p. 108—Atirro, Costa Rica (crit.).

*Cotyle serripennis* (not *Hirundo serripennis* Audubon) Sclater and Salvin, Ibis, 1859, p. 13—Rio Gualacate and Dueñas, Guatemala.

*Stelgidopteryx serripennis* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 237, 1883—Guatemala (part); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 206, 636, 1885—part, spec. c', e'-f', San Gerónimo, Guatemala (June), Irazú and Atirro, Costa Rica; Sharpe and Wyatt, Monog. Hirund., 2, p. 635, pl. 125 (adult), 1890—part, Costa Rica (Atirro, San José); Cherrie, Auk, 7, p. 335, 1890—San José, Costa Rica; idem, Auk, 9, p. 22, 1892—San José (breeding; spec. examined); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 123, 1907—part, Lake Atitlan, Guatemala.

*Stelgidopteryx serripennis serripennis* Carriker, Ann. Carnegie Mus., 6, p. 791, 1910—Juan Viñas, Miravalles, and Cachi, Costa Rica<sup>2</sup> (breeding).

<sup>1</sup> *Stelgidopteryx ruficollis fulvipennis* (Sclater) is another connecting link to *S. r. serripennis*, closing the gap between the North American form and *S. r. decolor*. Certain specimens with a minimum amount of cinnamonous color on the throat run exceedingly close to the former, while the opposite extreme is not separable from some Chiriquí birds (*decolor*). The fact that both *S. r. fulvipennis* and *S. r. uropygialis* are reported to occur in the highland region of Costa Rica traversed by the Caribbean Railroad renders the desirability of further information strongly felt. As Mr. Bangs has quite correctly stated, the Rough-winged Swallows of Central America constitute an aggregate of intermediates between the grayish-throated *serripennis* and the rufous-throated *uropygialis*, varying to such an extent that the discrimination of the several races proposed by Mr. Griscom and provisionally accepted by the present author remains more or less problematical.

*Additional material examined*.—Costa Rica: Monte Aguacate, 1; Cachi, 1; San José, 3.

<sup>2</sup> The locality Pózo Azúl de Pirris refers, of course, to *S. r. decolor*.

*Stelgidopteryx serripennis salvini* Carriker, Ann. Carnegie Mus., 6, p. 796, 1910—Chiriquí and Costa Rica; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 38, 1927—Labrados, Sinaloa (Sept.).

*Stelgidopteryx ruficollis salvini* Griscom, Proc. New Engl. Zool. Cl., 11, p. 70, 1929—from western Vera Cruz and western Guatemala to Costa Rica (crit.); idem, Bull. Amer. Mus. N. H., 64, p. 285, 1932—Antigua (breeding), Huehuetenango, and Panajachel, western Guatemala.

*Stelgidopteryx ruficollis fulvipennis* van Rossem, Bull. Mus. Comp. Zool., 77, p. 394, 1934 (crit.).

*Range*.—Highlands of south central Mexico (Labrados, Sinaloa; La Barca and Tuxpan, Jalisco; "western Vera Cruz"), western Guatemala, and highlands of Costa Rica (except Térraba Valley).

8: Mexico (Tuxpan, Jalisco [May 9], 4); Guatemala (Lake Atitlan [Apr. 8], 1); Costa Rica (Miravalles [March 30], 1; San José [July 9], 1; Guayábo [Feb. 1], 1).

### ***Stelgidopteryx ruficollis ridgwayi* Nelson.<sup>1</sup> YUCATAN ROUGH-WINGED SWALLOW.**

*Stelgidopteryx ridgwayi* Nelson, Proc. Biol. Soc. Wash., 14, p. 174, 1901—Chichen Itza, Yucatan (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 61, 1904—southeastern Mexico and Guatemala (monog.); Cole, Bull. Mus. Comp. Zool., 50, p. 134, 1906—Chichen Itza, Yucatan; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 38, 1927—Labrados, Sinaloa (Sept.).

*Cotyle serripennis* (not *Hirundo serripennis* Audubon) Owen, Ibis, 1861, p. 61—San Gerónimo, Guatemala (breeding; eggs descr.).

*Stelgidopteryx serripennis* Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 54, 1878—Guatemala (spec., now in Munich Museum, examined); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 237, 1883—part, San Gerónimo, Guatemala (breeding); Boucard, Proc. Zool. Soc. Lond., 1883, p. 442—Yucatan; Sharpe and Wyatt, Monog. Hirund., 2, p. 635, 1890—part, Yucatan and San Gerónimo, Guatemala (breeding); Chapman, Bull. Amer. Mus. N. H., 8, p. 278, 1896—Chichen Itza, Yucatan.

*Stelgidopteryx ruficollis ridgwayi* Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 479, 1927—Motzorongo and Texolo, Vera Cruz (crit.); Austin, l.c., 69, p. 384, 1929—Augustine, British Honduras (breeding; crit.); Griscom, Proc. New Engl. Zool. Cl., 11, p. 71, 1929—Yucatan, British Honduras,

<sup>1</sup>*Stelgidopteryx ruficollis ridgwayi* Nelson: Nearest to *S. r. serripennis*, but conspicuously larger and much darker, the upper parts being deep sooty brown instead of hair brown; breast and sides much more extensively and darker brown, the light area restricted to the center of the lower abdomen. Differs from *S. r. fulvipennis* by larger size and much darker coloration with less cinnamonaceous on the throat. Wing, 120–122.

Judging from two specimens, this appears to be a well-marked race, though the exact limits of its breeding range have yet to be ascertained.

*Material examined*.—Guatemala: Vera Paz, 2.

and Guatemala (crit.); idem, Bull. Amer. Mus. N. H., 64, p. 286, 1932—Finca Sepacuite and Secanquim, Vera Paz, Guatemala (breeding).

*Stelgidopteryx fulvipennis* (not *Cotyle fulvipennis* Sclater) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 200, 1869—Mérida, Yucatan.

**Range.**—Breeds in the hills of Alta Vera Paz, Guatemala, and in western British Honduras (Augustine); migratory and winter specimens have been recorded from Tabasco (Teapa), Yucatan, Vera Cruz (Motzorongo, Texolo), and even Sinaloa (Labrados [Sept.]).

**\**Stelgidopteryx ruficollis serripennis* (Audubon). ROUGH-WINGED SWALLOW.**

*Hirundo serripennis* Audubon, Orn. Biog., 4, p. 593, 1838—Charleston, South Carolina (type in U. S. National Museum).

*Stelgidopteryx ruficollis psammochrous* Griscom, Proc. New Engl. Zool. Cl., 11, p. 72, 1929—near Oposura, Sonora, Mexico (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Stelgidopteryx ruficollis aphractus* Oberholser, Sci. Pub. Clevel. Mus. N. H., 4, p. 5, 1932—Warner Valley, south of Adel, Oregon (type in Cleveland Museum).

*Stelgidopteryx serripennis* Baird, Rev. Amer. Bds., 1, p. 314, 1865—United States to Mexico (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 237, 1883—North America and Central America (part); Sharpe, Cat. Bds. Brit. Mus., 10, p. 206, 1885 (monog.); Sharpe and Wyatt, Monog. Hirund., 2, p. 635, pl. 215, 1890 (monog., part); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 58, 1904 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 21, p. 134, 1905—Escuinapa, Sinaloa; idem, l.c., 22, p. 176, 1906—Rio Sestén, Durango (crit.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 123, 1907—part, Mazatenango and Patulul, Guatemala; Peters, Auk, 30, p. 377, 1913—Camp Mengel, Quintana Roo; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 270, 1918—Gatun, Panama.

*Stelgidopteryx ruficollis serripennis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 60, 1901 (crit.); Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 458, 1928—Almirante, Panama; Grinnell, Univ. Calif. Pub. Zool., 32, p. 191, 1928—Lower California; Peters, Bull. Mus. Comp. Zool., 69, p. 457, 1929—Lancetilla, Honduras; Griscom, Proc. New Engl. Zool. Cl., 11, p. 72, 1929 (monog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 268, 1931—Saric, Tésia, Guaymas, and San José de Guaymas, Sonora (crit.); Griscom, Bull. Amer. Mus. N. H., 64, p. 285, 1932—San Lucas, Guatemala.

**Range.**—North America, from British Columbia, Montana, North Dakota, Minnesota, central Wisconsin, southeastern Ontario, southern New York, western Massachusetts, and Connecticut south to the southern United States, from southern California to central Florida and to northern Mexico (northern Lower California, Sonora, Chihuahua, northwestern Durango; (?) Tamaulipas, (?) Vera Cruz);



wintering from southern Arizona and Mexico southward to Panama.<sup>1</sup>

24: Oregon (Tillamook, 1); South Dakota (Moody County, 1); Arizona (Calabasas, 1; Tucson, 2); Texas (Corpus Christi, 1); Mississippi (Vicksburg, 1); Illinois (Grand Chain, 1; Warsaw, 1; Fox Lake, 1; Joliet, 1); Wisconsin (Beaver Dam, 1); New York (Ramapo, 1; Shelter Island, 1; Peterboro, 1); Mexico (Sabinas, Coahuila, 2; Mexico City, 2; Tampico, Tamaulipas, 1); Guatemala (Patulul, Solola, 3; Mazatenango, 1).

### Genus ALOPOCHELIDON Ridgway<sup>2</sup>

*Alopocheilidon* Ridgway, Proc. Biol. Soc. Wash., 16, p. 106, 1903—type, by orig. desig., *Hirundo fucata* Temminck.

#### \**Alopocheilidon fucata* (Temminck). TAWNY-HEADED SWALLOW.

*Hirundo fucata* Temminck, Nouv. Rec. Pl. Col., livr. 27, pl. 161, fig. 1, Oct., 1822—"au Brésil" (location of type not stated).

*Cotyle fucata* Burmeister, Journ. Orn., 8, p. 253, 1860—Mendoza; idem, Reise La Plata St., 2, p. 478, 1861—Mendoza; Pelzeln, Orn. Bras., 1, p. 18, 1868—Casa Pintada, Ypanema, and Itararé, São Paulo; Doering, Period. Zool. Argent., 1, p. 254, 1874—Barrancas, Corrientes; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba.

*Cotile fucata* White, Proc. Zool. Soc. Lond., 1882, p. 596—Santo Tomé, Corrientes; idem, l.c., 1883, p. 37—Cosquin, Cordoba; Salvin, Ibis, 1885, p. 206—Roraima, British Guiana.

*Atticora fucata* Baird, Rev. Amer. Bds., 1, p. 308, 1865 (crit.); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 441—São Paulo (Franca), Minas Geraes (Paracatú, Lagôa Santa), and Venezuela; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 188, 635, 1885—Brazil (Ypanema), Argentina (Cordoba, Mendoza), and British Guiana (Roraima); Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 117, 1885—Taquara, Rio Grande do Sul; Selater and Hudson, Arg. Orn., 1, p. 35, 1888—Argentina (Mendoza; Santo Tomé, Corrientes; Cosquin, Cordoba); Sharpe and Wyatt, Monog. Hirund., 2, p. 515, pl. 111, 1888 (monog.); Frenzel, Journ. Orn., 39, p. 118, 1891—Cordoba; Allen, Bull. Amer. Mus. N. H., 3, p. 346, 1891—

<sup>1</sup> As pointed out by van Rossem (l.c.), the Sonoran form (*S. r. psammochrous*) is not separable, its alleged distinctive characters being due to fading of the typical series. Birds from Jalisco (May 9), while similar to *serripennis* in coloration, are decidedly larger, and I am inclined to refer them to *S. r. fulvipennis*, though more adequate material is yet required to establish their proper status.

<sup>2</sup> *Alopocheilidon* Ridgway is closely allied to *Stelgidopteryx*, but differs nevertheless in lesser extent of adhesion of toes, and in the absence of the recurved tips to the barbs of the outer web of the outermost primary. It must be remarked, however, that the last-named character is developed only in adult males of *Stelgidopteryx*. The style of coloration, too, is very similar in the two groups, though, in *Alopocheilidon*, the rufous color also largely involves the head, it being confined to the throat and foreneck in *Stelgidopteryx*. It is hard to conceive how this swallow could ever have been associated with the genus *Atticora*.

Chapada, Matto Grosso; Aplin, *Ibis*, 1894, p. 167, pl. 5, fig. 2 (egg)—Cuchilla Grande and near Monzón River, Uruguay (nesting habits); Salvadori, *Boll. Mus. Zool. Torino*, 12, No. 292, p. 5, 1897—Caiza, Bolivia; Ihering, *Ann. Est. Rio Grande do Sul*, 16, p. 118, 1899—Mundo Novo and Pedras Brancas, Rio Grande do Sul; idem, *Rev. Mus. Paul.*, 3, p. 139, 1899—Piracicaba, Itapetininga, and Ypiranga, São Paulo; Kerr, *Ibis*, 1901, p. 223—Paraguayan Chaco; Lillo, *Anal. Mus. Nac. Buenos Aires*, 8, p. 174, 1902—Tucumán; idem, *Rev. Letr. Cienc. Soc.*, 3, p. 41, 1905—Tucumán; Baer, *Ornis*, 12, p. 215, 1904—Tapia, Tucumán; Bruch, *Rev. Mus. La Plata*, 11, p. 256, 1904—Rosario de Lerma, Salta; Hartert and Venturi, *Nov. Zool.*, 16, p. 170, 1909—Pindé (Chaco), Tucumán, and Santo Tomé, Corrientes (nesting habits, eggs); Grant, *Ibis*, 1911, p. 92—Mortero, Paraguay.

*Alopochelidon fucatus*(a) Ihering and Ihering, *Cat. Faun. Braz.*, 1, p. 342, 1907—São Paulo (Ypiranga, Itapetininga, Piracicaba, Franca, and San Bernardo); Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 553, 1910 (range in Argentina); Sanzin, *El Hornero*, 1, p. 151, 1918—Mendoza; Tremoleras, l.c., 2, p. 22, 1920—Uruguay; Giacomelli, l.c., 3, p. 68, 1923—La Rioja; Dinelli, l.c., 3, p. 253, 1924—Tucumán (nest and eggs descr.); Pereyra, l.c., 4, p. 32, 1927—San Rafael, Mendoza; Chapman, *Bull. U. S. Nat. Mus.*, 117, p. 102, 1921—below San Miguel Bridge, Urubamba, Peru; Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 342, 1926—Formosa, Formosa, and Tunuyán, Mendoza; Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 319, 1930—Matto Grosso (range); Chapman, l.c., 63, p. 105, 1931—Philipp Camp, Roraima (crit.).

*Atticora fucata roraimae* Chubb, *Bull. Brit. Orn. Cl.*, 40, p. 155, June, 1920—Mount Roraima, British Guiana (type in British Museum examined); idem, *Bds. Brit. Guiana*, 2, p. 348, 1921—Roraima.

**Range.**—Northern Argentina, south to Mendoza, Cordoba, Santa Fé, and Corrientes; Uruguay; Paraguay; southern Brazil, from Rio Grande do Sul north to Matto Grosso, São Paulo, and Minas Geraes; Bolivia (Caiza); Peru (Urubamba Canyon); British Guiana (Roraima); Venezuela (mountains near Cumaná, Sucre).<sup>1</sup>

<sup>1</sup> I am unable to make out any racial variation. Birds from Roraima and Venezuela are absolutely identical in coloration with southern examples, but average perhaps slightly smaller. Adults (sexes not different in size) measure as follows:

	Wing	Tail
One from Paraguay (Bernalcué).....	99	47
Eight from Brazil (São Paulo).....	98-104	45-49
Five from Roraima.....	96-101	42-47
Two from Venezuela (near Cumaná).....	94, 96	42, 45

This swallow had already been recorded by Reinhardt from Venezuela, but the locality was questioned by Sharpe. The late Eugene André, however, secured two adults in the mountains near Cumaná in March, 1897, which are now in the Munich Museum, thus confirming its occurrence in Venezuela. It remains, on the other hand, an open question, whether this species breeds in Venezuela and on Roraima or appears there only as a migrant from the south.

**Additional specimens examined.**—Paraguay: Bernalcué, 1.—Brazil, São Paulo: Ypanema, Casa Pintada, etc., 10.—British Guiana: Roraima, 5.—Venezuela: mountains near Cumaná, 2.

7: Argentina (Concepción, Tucumán, 5); Uruguay (Treinta y Tres, 1); Brazil (Victoria, São Paulo, 1).

### Genus NEOCHELIDON Sclater<sup>1</sup>

*Microchelidon* (not of Reichenbach, 1853) Sclater, Cat. Coll. Amer. Bds., p. 39, 1862—type, by monotypy, *Petrochelidon tibialis* Cassin.

*Neochelidon* Sclater, Cat. Coll. Amer. Bds., p. [XVI], 1862—new name for *Microchelidon* Sclater, preoccupied.

### *Neochelidon tibialis tibialis* (Cassin).<sup>2</sup> BRAZILIAN WHITE-THIGHED SWALLOW.

*Petrochelidon* (?) *tibialis* Cassin, Proc. Acad. Nat. Sci. Phila., 6, p. 370, 1853—habitat unknown, "probably South America"; we suggest vicinity of Rio de Janeiro, Brazil (type in Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 44, 1899).

*Microchelidon tibialis* Sclater, Cat. Coll. Amer. Bds., p. 39, 1862—Brazil.

*Neochelidon tibialis* Cabanis, Journ. Orn., 22, p. 83, 1874—Cantagallo, Prov. Rio de Janeiro (spec. in Berlin Museum examined).

*Atticora tibialis* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 231, 1883—part, Brazil (spec. in Swainson Collection, Cambridge, England); Sharpe, Cat. Bds. Brit. Mus., 10, p. 185, 1885—part, Brazil; Sharpe and Wyatt, Monog. Hirund., 2, p. 501, 1889—part, Brazil; Ihering, Rev. Mus. Paul., 4, p. 152, 1900—Cantagallo (ex Cabanis); idem, Cat. Faun. Braz., 1, p. 341, 1907—part, Cantagallo, Rio de Janeiro.

<sup>1</sup>*Neochelidon* Sclater forms a well-marked group, recognizable by its proportionately short tail, short wing-tip, and remarkably short hallux. In coloration it bears a striking resemblance to some of the smaller swifts of the genus *Chaetura*.

<sup>2</sup>*Neochelidon tibialis tibialis* (Cassin) is very little known to ornithologists. Cassin described it from an adult of unknown origin in the Rivoli Collection, but a young bird believed to be conspecific and contained in the same collection was labeled as coming from "Brazil." It was reserved for Dr. Chapman to point out that Cassin's type did not wholly agree with either the Amazonian or the Pacific race. This author speculates on the habitat of the typical form, but, like Sharpe and Wyatt, completely overlooks Cabanis's record from Cantagallo, inland of Rio de Janeiro, where Carlos Euler had observed a flock of this swallow resorting to holes in a steep bank. A specimen collected by Euler (Berlin Museum, No. 19719), when compared to the two other races, shows exactly the differences alluded to by Chapman, and so does a skin of the characteristic "Rio" preparation in the Vienna Museum. The University Museum in Cambridge, England, also has a specimen from the Swainson Collection, which, according to its "make," originated in southern Brazil. There can be little doubt, therefore, that *N. t. tibialis* is an inhabitant of southeastern Brazil. The depth of the furca varies much within the same limits as in *N. t. griseiventris*, which it also resembles in size, but the Brazilian race is apparently darker underneath, nearly hair brown or olive brown on throat, chest, and tail coverts. Since only a few old skins are available for comparison, the difference may, however, be merely due to post-mortem change, and fresh material from Brazil is urgently desired to settle the question definitely.

*Measurements*.—Adult female, Cantagallo: wing, 89; tail, 49; furca, 9; bill, 6. Adult, Rio de Janeiro: wing, 96; tail, 58; furca, 15; bill, 6.

*Range*.—Southeastern Brazil, in State of Rio de Janeiro (Cantagallo).

***Neochelidon tibialis griseiventris* Chapman.<sup>1</sup> AMAZONIAN WHITE-THIGHED SWALLOW.**

*Neochelidon griseiventris* Chapman, Amer. Mus. Nov., 138, p. 9, Oct., 1924—Candamo, southeastern Peru (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 556, 1926—Zamora, Ecuador.

*Neochelidon tibialis* (not *Petrochelidon tibialis* Cassin) Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, pp. 597, 598—Cosnipata, Dept. Cuzco, Peru (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 67, 1904—part, Cosnipata, Peru.

*Atticora tibialis* Taczanowski, Orn. Pér., 1, p. 242, 1884—part, Peru (Cosnipata); Sharpe, Cat. Bds. Brit. Mus., 10, p. 185, 1885—part, spec. c, Cosnipata, Peru; Sharpe and Wyatt, Monog. Hirund., 2, p. 501, 1889—part, Peru (Cosnipata); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—La Gloria, Chanchamayo, Dept. Junín, Peru.

*Range*.—Tropical zone of upper Amazonia, from the eastern base of the eastern Andes of Colombia south through eastern Ecuador (Zamora) to eastern Peru (La Gloria, Chanchamayo, and Tulumayo, Vitoc, Dept. Junín; Cosnipata, Candamo, and Marcapata, Dept. Cuzco).

**\**Neochelidon tibialis minimus* Chapman.<sup>2</sup> PACIFIC WHITE-THIGHED SWALLOW.**

<sup>1</sup>*Neochelidon tibialis griseiventris* Chapman: Similar to *N. t. tibialis* in size and depth of tail-furca, but under parts decidedly paler and more grayish, about mouse gray with a slight brownish or drab cast.

Native "Bogotá" skins agree with Peruvian birds and doubtless come from the eastern foot of the eastern Andes. One or two specimens are more brownish below, thus verging in the direction of typical *tibialis*, though being still paler.

MEASUREMENTS

	Wing	Tail	Furca	Bill
Adults (unsexed), "Bogotá".	90, 92, 96	49, 49, 57	9, 10, 15	5, 6, 6
Male, La Gloria, Chanchamayo, Peru.....	97½	56	15	6
Female, La Gloria, Chanchamayo, Peru.....	89½	47	10	5½
Male, Marcapata, Cuzco, Peru.....	90	50	11	6
Unsexed, Marcapata, Peru..	89	49	12	5

<sup>2</sup>*Neochelidon tibialis minimus* Chapman: Nearest to *N. t. tibialis* in coloration, but under parts even darker, ranging from olive brown to near clove brown; uropygial area darker, sometimes barely different from color of back; wings and tail markedly shorter; tail-furca shallower. Wing, 83 (female) to 89 (male); tail, 38 (female) to 47 (male); furca, 7-11; bill, 5-6.

*Material examined*.—Panama: Panama Railroad, 1.—Colombia: San José, 1.—Ecuador: Paramba, 3; Santo Domingo, 3; Chimbo, 2.

*Neochelidon tibialis minimus* Chapman, Amer. Mus. Nov., 138, p. 9, Oct., 1924—Juntas de Tamaná, Rio San Juan, Chocó, western Colombia (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 556, 1926—Rio Sapayo, Ecuador.

*Neochelidon tibialis* (not *Petrochelidon tibialis* Cassin) Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 347—Panama Railroad; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 67, 1904—part, Isthmus of Panama, Colombia, and western Ecuador (Chimbo); Chapman, Bull. Amer. Mus. N. H., 36, p. 504, 1917—Juntas de Tamaná and San José, western Colombia; Griscom, Amer. Mus. Nov., 282, p. 7, 1927—Sambú River, Panama.

*Atticora tibialis* Baird, Rev. Amer. Bds., 1, p. 307, 1865—Panama Railroad (crit.; excl. hab. Brazil); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Remedios, Colombia (nest descr.); Berlepsch and Taczanowski, l.c., 1883, p. 543—Chimbo, Ecuador; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 231, 1883—part, Isthmus of Panama and Colombia (Remedios); Taczanowski, Orn. Pér., 1, p. 242, 1884—part, Panama, Colombia (Remedios), and Ecuador (Chimbo); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 185, 634, 1885—part, spec. a, b, d-f, Panama and Colombia (Remedios); Sharpe and Wyatt, Monog. Hirund., 2, p. 501, pl. 97, 1889—part, Panama and Colombia (Remedios); Hartert, Nov. Zool., 5, p. 480, 1898—Chimbo and Paramba, Ecuador; Goodfellow, Ibis, 1901, p. 316—Santo Domingo, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 66, 1911—Santo Domingo.

*Range*.—Tropical zone from Panama (Panama Railroad) through western Colombia, extending east into Antioquia (Remedios), to western Ecuador (as far south as Chimbo).

1: Ecuador (Puente de Chimbo, 1).

### Genus PYGOCHELIDON Baird

*Pygochelidon* Baird, Rev. Amer. Bds., 1, p. 308, May, 1865—type, by orig. desig., *Hirundo cyanoleuca* Vieillot.

### \**Pygochelidon cyanoleuca cyanoleuca* (Vieillot). BLUE-AND-WHITE SWALLOW.

*Hirundo cyanoleuca* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 509, 1817—based on "Golondrina de los timoneles negros" Azara, No. 303, Paraguay;<sup>1</sup> Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 68, 1837—"Buenos Aires". [=Maldonado] and "Moxos" [=Cochabamba], Bolivia (spec. in Paris Museum examined); Léotaud, Ois. Trinidad, p. 90, 1866—Trinidad.

<sup>1</sup> As has been pointed out by Bertoni (Faun. Parag., p. 61, 1914) and Wetmore (Bull. U. S. Nat. Mus., 133, p. 343, 1926), Azara's description, the sole basis of *Hirundo cyanoleuca* Vieillot, is not definite enough to decide whether it refers to the species commonly designated by that name or to *P. c. patagonica*. In view of the fact that the Spanish naturalist calls "los timoneles inferiores negros" it appears, however, preferable to adhere to current usage until more extended collecting has been done in Paraguay and the adjoining parts of Argentina.

- Hirundo minuta* Wied, Reise Bras., (4to ed.), 2, p. 336, 1821—Rio de Janeiro (types in Wied Collection, now in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 216, 1889); Temminck, Nouv. Rec. Pl. Col., livr. 35, pl. 209, fig. 1, 1823—Brazil; Wied, Beitr. Naturg. Bras., 3, (1), p. 369, 1830—Rio de Janeiro.
- Hirundo melampyga* Lichtenstein, Verz. Doubl. Berliner Mus., p. 57, 1823—Bahia (type in Berlin Museum); Tschudi, Faun. Peru., Aves, p. 133, 1846—wood region of Peru.
- Hirundo melanopyga* Tschudi, Arch. Naturg., 10, (1), p. 269, 1844—Peru (emendation of *H. melampyga* Lichtenstein).
- (?) *Pygochelidon flavipes* Chapman, Amer. Mus. Nov., 30, p. 8, 1922—Maraynioc, Dept. Junín, Peru (type in the American Museum of Natural History, New York;=juv.).
- Atticora cyanoleuca* Burmeister, Syst. Uebers. Th. Bras., 3, p. 147, 1856—southeastern Brazil (Rio de Janeiro, Nova Friburgo, and Congonhas and Lagoa Santa, Minas Geraes); Cabanis, Journ. Orn., 8, p. 401, 1860—San José, Costa Rica; idem, l.c., 9, p. 91, 1861—Costa Rica (descr. juv.); Baird, Rev. Amer. Bds., 1, p. 309, 1865—Bahia Negra, Rio Paraguay, and Bahia, Brazil (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 627—Puerto Cabello, Venezuela; Pelzeln, Orn. Bras., 1, p. 18, 1868—Rio de Janeiro and Ypanema, São Paulo (spec. examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 442—Lagoa Santa, Minas Geraes; Salvin, Proc. Zool. Soc. Lond., 1870, p. 184—Calovévora, Veragua; Wyatt, Ibis, 1871, p. 323—Ocaña, Colombia; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—part, Amable Maria, Peru; Sclater and Salvin, l.c., 1876, p. 16—Maranura, Peru; Taczanowski, l.c., 1879, p. 224—part, Tambillo, Peru; Sclater and Salvin, l.c., 1879, p. 495—Frontino, Colombia (eggs descr.); idem, l.c., 1879, p. 595—"Moxos," Cangalli, and Tilotilo, Bolivia; Taczanowski, l.c., 1880, p. 192—Callacate, Peru; idem, l.c., 1882, p. 8—Huambo, Peru; Forbes, Ibis, 1881, p. 329—Pernambuco and Parahyba, Brazil; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo, Ecuador; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 229, 1883—Costa Rica (San José, Barranca), Veragua (Calovévora), etc.; Taczanowski, Orn. Pér., 1, p. 244, 1884—part, Amable Maria, Callacate, Huambo, Maranura; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 186, 634, 1885 (monog., part); Salvin, Ibis, 1885, p. 206—Camacusa and Roraima, British Guiana (spec. examined); Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 117, 1885—Taquara, Rio Grande do Sul; Sharpe and Wyatt, Monog. Hirund., 2, p. 505, pl. 99, 1889—part (excl. Chilean, Argentine, and some Peruvian localities); Allen, Bull. Amer. Mus. N. H., 3, p. 346, 1891—Chapada, Matto Grosso; Salvin, Nov. Zool., 2, p. 4, 1895—Cajabamba, Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 333—La Merced, Chanchamayo, Peru; Robinson, Proc. U. S. Nat. Mus., 18, p. 685, 1896—La Guaira, Venezuela; Phelps, Auk, 14, p. 364, 1897—Cumaná, Venezuela; Hartert, Nov. Zool., 5, p. 480, 1898—Cayambe and Ibarra, Ecuador; Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—La Concepción, Colombia; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 11, 1899—Gualaquiza, La Concepción (Chota), Ottavalo, Chillo Valley (Quito), Sig-sig, Cuenca, Quito, and Niebli,

Ecuador; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 118, 1899—Mundo Novo, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 140, 1899—São Paulo (Ypiranga, São Sebastião, Iguapé); idem, l.c., 4, p. 152, 1900—Cantagallo and Nova Friburgo, Rio de Janeiro; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 177, 1901—La Guaira, Venezuela; Goodfellow, Ibis, 1901, p. 316—Ecuador (alt. 600–10,000 ft.); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902—Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 41, 1905—Tucumán; Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 77, 1910—Parnaguá, Xingú, and Queimadas, Rio Parnahyba, Piahyba (spec. examined); Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 66, 1911—Nono, Tumbaco, and Chambo, Ecuador; Chubb, Bds. Brit. Guiana, 2, p. 347, 1921—Roraima and Camacusa; Williams, Bull. Dept. Agric. Trin. Tob., 20, p. 128, 1922—Caroni and Harmony Hall, Trinidad.

*Petrochelidon cyano-leuca* Sclater, Proc. Zool. Soc. Lond., 26, p. 551, 1858—Riobamba, Ecuador; idem, l.c., 27, p. 138, 1859—Pallatanga, Ecuador; idem, l.c., 28, pp. 75, 85, 1860—Quito, Nanegal, and Perucho, Ecuador; idem, Cat. Coll. Amer. Bds., p. 40, 1862—Bogotá, Riobamba, Bolivia, and Brazil.

*Pygochelidon cyano-leuca* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 69, 1904—Costa Rica to Brazil, Bolivia, and Peru (monog., full bibliog.); Bangs, Auk, 24, p. 306, 1907—Boruca, Paso Real, and Barránca, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 789, 1910—Guayábo, Guayabal, San José, Escazú, Carrillo, La Hondura, Juan Viñas, and Boruca, Costa Rica; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 352, 1910—Tucumán; Chapman, Bull. Amer. Mus. N. H., 36, p. 505, 1917—Caldas, San Antonio, Popayan, Cerro Munchique, Gallera, Ricaurte, Salento, Santa Elena, Barro Blanco, Rio Toché, El Eden, La Palma, and El Carmen, Bogotá, Colombia; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 270, 1918—Gatun, Panama; Bangs and Noble, Auk, 35, p. 458, 1918—Huancabamba, Perico, and Charapi, Peru (crit.); Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 9, 1920—San Gaban, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 102, 1921—San Miguel Bridge and Torontoy, Peru; idem, Amer. Mus. Nov., 30, p. 1, 1922 (monog.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 435, 1922—San Miguel, Páramo de Mamarongo, and Rio Hacha, Colombia; Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 164, 1924—Silla de Caracas and Galipán, Cerro del Avila, Venezuela (crit.); Chapman, Amer. Mus. Nov., 191, p. 10, 1925—San Antonio, Sucre, Venezuela; idem, Bull. Amer. Mus. N. H., 55, p. 556, 1926—Ecuador and northwestern Peru (crit.); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 181, 1926—Fazenda Ferreira and Candido de Abreu, Paraná; Wetmore, Bull. U. S. Nat. Mus., 133, p. 343, 1926—Lazcano, Uruguay (crit.); Holt, Bull. Amer. Mus. N. H., 57, p. 311, 1928—Serra do Itatiaya, Brazil; Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 398, 1930—Huánuco and Huachipa, Peru; Naumburg, Bull. Amer. Mus. N. H., 60, p. 318, 1930—Matto Grosso (Chapada); Chapman, l.c., 63, p. 105, 1931—Roraima (Paulo) and Mount Duida (Savanna Hills), Venezuela.

*Pygochelidon cyano-leuca cyano-leuca* Bertoni, Faun. Parag., p. 61, 1914—Alto Paraná, Paraguay.

*Diplochelidon cyanoleucus* Ihering, Cat. Faun. Braz., 1, p. 341, 1907—São Paulo (Ypiranga, Cachoeira, São Sebastião), Rio de Janeiro (Ilha Grande), and Minas Geraes (Vargem Alegre).

*Atticora cyanoleuca* var. *montana* Baird, Rev. Amer. Bds., 1, p. 310, 1865—Costa Rica (Barránca, San José) and Bogotá (type, from Barránca, Costa Rica, in U. S. National Museum); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 96, 1868—San José and Barránca, Costa Rica; Frantzius, Journ. Orn., 17, p. 294, 1869—Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 67—San José and Cartago, Costa Rica.

*Atticora cyanoleuca montana* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Navarro de Cartago, Zarcéro de Alajuela, and Alajuela, Costa Rica; Allen, Bull. Amer. Mus. N. H., 2, p. 80, 1889—"near Valparaiso, Chile," errore, = Bolivia; Cherrie, Auk, 9, p. 22, 1892—San José, Costa Rica (nesting habits, descr. juv.); Bangs, Proc. New Engl. Zool. Cl., 3, p. 60, 1902—Volcan de Chiriquí, Panama.

*Range*.—Eastern Brazil, from Piahy and Parahyba south to Rio Grande do Sul; Matto Grosso (recorded from Bahia Negra and Chapada); Uruguay; Paraguay; extreme northwestern Argentina (Tucumán); and thence extending north through Bolivia, Peru (excepting the Pacific slope of the Cordillera de la Costa), Ecuador, and Colombia to Costa Rica and east through the Caribbean mountain ranges of Colombia (Santa Marta region) and Venezuela to Trinidad and British Guiana.<sup>1</sup>

55: Brazil (Therezopolis, Rio de Janeiro, 1; Rio das Velhas, near Lagôa Santa, Minas Geraes, 1); Argentina (Aconquija, Tucumán, 2; Concepción, Tucumán, 5); Bolivia (Parotani, Cochabamba, 1); Peru (Huánuco, 3; Huachipa, Huánuco, 1; Hacienda Llagueda, northeast of Otuzco, 1; Hacienda Limón, ten miles west of Balsas, 1;

<sup>1</sup> Further subdivision of the small form with fuscous under wing coverts and wholly black lower tail coverts appears to be impracticable. There is no constant difference between specimens from such widely separated localities as Costa Rica and Argentina (Tucumán), nor am I able to distinguish a good series of skins from eastern Brazil. The gloss of the upper parts is exceedingly variable, changing from violaceous and deep indigo blue to greenish blue, but this variation is wholly independent of geographic areas. I cannot help thinking that *P. flavipes* was based on a juvenile individual of the present form with unusually glossy upper surface. We have two specimens (and I have seen others) that correspond pretty well to the description except for having the throat dingy whitish, the yellowish feet and the soft yellow gape being unmistakable signs of immaturity. They were collected, along with a series of adults, in the Tropical zone at Moyobamba.

*Additional material examined*.—Trinidad: Chaguanas, 2.—Venezuela: Campos Alegre, Sucre, 1; Los Palmes, Sucre, 4; Silla de Caracas, 2; Galipán, Cerro del Ávila, 12; Mérida, 5.—British Guiana: Roraima, 2 (July).—Costa Rica: 6.—Ecuador: Ibarra, 11; Cayambe, 3; Paramba, 2; near Quito, 2; Guala, 1; Santo Domingo, 2.—Peru: Nuevo Loreto, 2; Santo Domingo, Marcapata, 3; La Aroya, Inambari Val, 1; San Gaban, Carabaya, 1.—Brazil: Rio Grande do Sul, 2; Roça Nova, Serra do Mar, Paraná, 1; Ypanema, São Paulo, 5; Rio de Janeiro, 5; Petropolis, Rio de Janeiro, 1; Victoria, Espírito Santo, 1; Parnaguá, Piahy, 2; Xingú, near Parnaguá, Piahy, 2; Queimadas, Rio Parnahyba, Piahy, 1.—Uruguay: Maldonado, 1.—Bolivia: Yungas, 1; Cochabamba, 1.



Moyobamba, 14); Ecuador (Puente de Chimbo, 1); Colombia (San Antonio, Cauca, 1; Caldas, 1; "Bogotá," 2); Venezuela (Tabay, Mérida, 1; Caracas, 2; Macuto, Caracas, 11); Costa Rica (Boruca, 1; San José, 1; Cartago, 1; Peralta, 3).

**\*Pygochelidon cyanoleuca patagonica** (Lafresnaye and d'Orbigny).<sup>1</sup> PATAGONIAN SWALLOW.

*Hirundo patagonica* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 69, 1837—Patagonia=Rio Negro (type in Paris Museum examined).

*Atticora hemipyga* Burmeister, Reise La Plata St., 2, p. 479, 1861—Mendoza (types in Halle Museum examined).

*Hirundo cyanoleuca* (not of Vieillot) Gould, in Darwin, Zool. Beagle, 3, p. 41, 1839—Bahia Blanca (breeding) and Valparaiso, Chile; Des Murs, in Gay, Hist. Fis. Pol. Chile, Zool., 1, p. 267, 1847—Chile; Sclater, Proc. Zool. Soc. Lond., 1867, p. 321—Chile; Philippi, Anal. Univ. Chile, 31, p. 248, 1868—Chile; Landbeck, Zool. Garten, 18, p. 235, 1877—Chile.

*Attiroca cyanoleuca* Burmeister, Journ. Orn., 8, p. 253, 1860—Paraná and Mendoza (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 178—Nauta, Peru (spec. in Tring Museum examined); Sclater, l.c., 1867, pp. 321, 337—Chile; (?) Sclater and Salvin, l.c., 1867, p. 749—Chayvetas, Peru; idem, l.c., 1869, p. 159—Conchitas, Buenos Aires; idem, l.c., 1873,

<sup>1</sup> *Pygochelidon cyanoleuca patagonica* (Lafresnaye and d'Orbigny): Similar to *P. c. cyanoleuca*, but larger; wings, greater wing coverts, and tail paler, less blackish; axillars and under wing coverts mouse gray rather than fuscous; shorter under tail coverts white, even the longer ones basally whitish. The supposed characters of the juvenile plumage appear to require corroboration, for I find much individual variation among immature birds of the members of the genus.

Although Dr. Chapman has taken great pains in establishing its specific distinctness, I cannot believe that the Patagonian Swallow is anything but the southern representative of *P. cyanoleuca*. While admitting that the status of *P. c. cyanoleuca* and *P. c. patagonica* in Uruguay and northwestern Argentina, whence both have been recorded, has yet to be determined, the breeding range of the latter is evidently more southerly, comprising as it does the greater part of Argentina and the whole of Chile, where *P. c. cyanoleuca* has never been met with during the nesting period. Certain individuals, moreover, are decidedly intermediate, and the characters of *P. c. peruviana* tend to support the view of their close relationship. Swallows being great wanderers, it is not at all surprising that *P. c. patagonica*, on its winter migration, should invade the breeding territory of the allied form, since similar conditions are known to exist in other species of this family, e.g., *Phaeoprogne tapera fusca*. Its occurrence in the Tropical zone at this time of the year does not seem of much importance in birds gifted with such unusual powers of flight.

*Additional material examined*.—Chile: Huasco, Tarapacá, 1; Calama, Antofagasta, 1 (March 1); unspecified, 5.—Argentina: Rio Negro, Patagonia, 1 (the type); Paso Limay, Neuquen, 3 (Nov. 11); Mendoza, 2; Puente del Inca, Mendoza, 1; Buenos Aires, Bahia Blanca, 2; Barracas al Sud, 1 (Sept. 21); Est. San Martino Monte, 3 (Dec.-Jan.); Estancia Espartillar, 1 (Nov. 10); Los Yngleses, Ajó, 2 (Feb. 20); Santa Elena, Entre Rios, 1 (Sept. 15); Chilecito, La Rioja, 1 (March 27); Est. La Germania, Santa Fé, 2 (Aug. 6).—Uruguay: Santa Elena, 1 (Nov. 18, 1892. O. V. Aplin).—Peru: Cosnipata, 5 (Sept. 20-Oct. 17); Yurimaguas, 1 (Apr. 16); Nauta, 2 (Apr. 22, 25).

- p. 258—Nauta, Yurimaguas, and (?) Chyavetas, Peru; Durnford, Ibis, 1876, p. 158—Flores, Buenos Aires (breeding); idem, Ibis, 1877, pp. 32, 170—Chubut Valley, Patagonia, and Buenos Aires (breeding); Reed, Anal. Univ. Chile, 49, p. 543, 1877—Hacienda de Cauquenes, Colchagua, Chile; Durnford, Ibis, 1878, p. 392—Chubut Valley; White, Proc. Zool. Soc. Lond., 1882, p. 596—Salto, Buenos Aires, and Catamarca; Salvin, l.c., 1883, p. 420—Coquimbo, Chile; Barrows, Bull. Nutt. Orn. Cl., 8, p. 90, 1883—Concepción, Entre Rios (visitor) and Buenos Aires (Azúl and Bahía Blanca); Taczanowski, Orn. Pér., 1, p. 244, 1884—part, Yurimaguas and (?) Chyavetas, Peru; Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 81, 1884—Tandil, Prov. Buenos Aires; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 186, 634, 1885—part, Chile, Buenos Aires, Cosquin (Cordoba), and Peru (Cosnipata, Nauta); Sclater, Proc. Zool. Soc. Lond., 1886, p. 397—Huasco, Tarapacá, Chile (spec. examined); Sclater and Hudson, Argent. Orn., 1, p. 33, 1888—Buenos Aires (habits); Sharpe and Wyatt, Monog. Hirund., 2, p. 505, 1889—part, Cosnipata (Peru), Chile, and Argentina (Cosquin, Cordoba, etc.); Ridgway, Proc. U. S. Nat. Mus., 12, p. 131, 1889—Port Elizabeth and Gregory Bay, Straits of Magellan; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba; Holland, Ibis, 1890, p. 425—Estancia Espartillar, Buenos Aires (spec. examined); Aplin, Ibis, 1894, p. 166—Uruguay (breeding; spec. examined); Koslowsky, Rev. Mus. La Plata, 6, pp. 278, 289, 1895—Chilecito, La Rioja, and Catamarca (spec. examined); Reed, Anal. Univ. Chile, 93, p. 199, 1896—Chile; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 5, 1897—Caiza, Bolivia (crit.); Lane, Ibis, 1897, p. 15—Sacaya, Tarapacá, Chile; Albert, Anal. Univ. Chile, 100, p. 870, 1898—Chile (monog.); Schalow, Zool. Jahrb., Suppl., 4, p. 728, 1898—Chile (nest and eggs descr.); Gosse, in Fitzgerald, The Highest Andes, p. 343, 1899—Puento del Inca, Mendoza (spec. examined); (?) Lönnberg, Ibis, 1903, pp. 450, 456—Moreno, Jujuy, and San Luis, Tarija, Bolivia; (?) Baer, Ornith., 12, p. 215, 1904—Santa Ana (Oct.-Nov.) and Lara (alt. 4,000 meters, Feb.), Tucumán; Crawshaw, Bds. Tierra del Fuego, p. 48, 1907—Tierra del Fuego; Grant, Ibis, 1911, p. 92—Los Yngleses, Ajó, Buenos Aires (spec. examined); Gibson, Ibis, 1918, p. 383—Cape San Antonio, Buenos Aires; Pässler, Journ. Orn., 70, p. 470, 1922—Coronel, Chile (nest and eggs descr.); Bullock, Rev. Chil. Hist. Nat., 33, p. 183, 1929—Angol, Malleco, Chile.
- (?) *Pygochelidon cyanoleuca* Dinelli, El Hornero, 3, p. 254, 1924—Tucumán (breeding habits).
- Atticora patagonica* Baird, Rev. Amer. Bds., 1, p. 311, 1865—Uruguay and Patagonia (crit.); Hartert and Venturi, Nov. Zool., 16, p. 169, 1909—Buenos Aires (Barracas al Sud, Bahía Blanca, San Martino Monte) (crit.).
- Atticora cyanoleuca hemipyga* Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba.
- Hirundo melampyga* (not of Lichtenstein) Philippi, Anal. Mus. Nac. Chile, Zool., 15, p. 24, pl. 20, fig. 3, 1902—Chile (crit.).
- Pygochelidon patagonica* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 69, 1904—Chile, Patagonia, Uruguay, and Argentina (crit.); Giacomelli,

El Hornero, 3, p. 68, 1923—La Rioja; Bullock, l.c., 3, p. 93, 1923—Chile (nest descr.).

*Pygochelidon cyanoleuca patagonica* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 353, 1910 (range in Argentina); Barros, Rev. Chil. Hist. Nat., 24, p. 147, 1920—Nilahue, Curicó, Chile; idem, l.c., 25, p. 186, 1921—Los Andes and Rio Blanco, Aconcagua, Chile; Tremoleras, El Hornero, 2, p. 22, 1920—Montevideo, Colonia, Flores, and Rio Negro, Uruguay; Daguerre, l.c., 2, p. 269, 1922—Rosas, Prov. Buenos Aires; Marelli, Mem. Min. Obr. Publ. for 1922–23, p. 652, 1924—Prov. Buenos Aires; Wilson, El Hornero, 3, p. 359, 1926—Dept. General López, Santa Fé.

*Pygochelidon patagonica patagonica* Chapman, Amer. Mus. Nov., 30, p. 3, 1922 (monog.); Peters, Bull. Mus. Comp. Zool., 65, p. 327, 1923—Huanu-luan, Rio Negro; Wetmore, Bull. U. S. Nat. Mus., 133, p. 344, 1926—Paraguay (west of Puerto Pinasco), Buenos Aires (Carhue, Guamini), Rio Negro (General Roca), Neuquen (Zapala), and Mendoza (Potrerillos); idem, Univ. Calif. Pub. Zool., 24, p. 453, 1926—Rio Negro (Anecon Grande, Arroyo Cumallo) and Chubut (Rio Pico); Stone, Rep. Princet. Univ. Exp. Patagonia, 2, Zool., p. 816, 1928—Patagonia; Barros, Rev. Chil. Hist. Nat., 34, pp. 315, 319, 1930—above Portillo, Santiago, Chile, and Cordillera de Mendoza; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 303, 1930—Estancia La Germania, Santa Fé; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 45, 1932—Chile (crit.).

*Range*.—Chile, from Tarapacá to the Straits of Magellan and Tierra del Fuego; Argentina north to the Paraguayan and Bolivian boundaries; Uruguay; in winter spreading northwards to eastern Peru, Venezuela (Cumaná; May 23), and even Panama (Juan Mina, Rio Chagres; July 17).

15: Chile (Baños del Toro, Coquimbo, 1; Papudo, Aconcagua, 1; Lake Gualletué, Cautín, 1); Argentina (Laguna Blanca, Catamarca, 2; Las Pavas, Tucumán, 1; Concepción, Tucumán, 7); Peru (San Ramón, Chanchamayo, 1; Yurimaguas, 1).

**\*Pygochelidon cyanoleuca peruviana** Chapman.<sup>1</sup> PERUVIAN SWALLOW.

<sup>1</sup> *Pygochelidon cyanoleuca peruviana* Chapman: Very similar to *P. c. patagonica*, but slightly smaller; axillars and under wing coverts even paler grayish brown; under tail coverts mostly black, with bluish reflections on the apical margins, only the basal series with little white at the extreme base. Wing, 95–97, (female) 93–94; tail, 52–54, (female) 50–51.

While every one of the above characters may also be found in occasional individuals of *P. c. patagonica* from Chile and Argentina, the series from the Peruvian coast is so uniform that its recognition as a distinct race seems perfectly justified. Birds from Arequipa are slightly larger (wing of males, 100–101; tail, 53–54), but agree in coloration with those from more northern localities.

*Additional specimens examined*.—Peru: Arequipa, 3; Ica, 2; Lima, 2; Vitarte, 2; Huaral, 6.

*Pygochelidon patagonica peruviana* Chapman, Amer. Mus. Nov., 30, p. 7, Feb., 1922—Huaral, Prov. Lima, Peru (type in the American Museum of Natural History, New York); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 398, 1930—Matucana and Santa Eulalia, Lima (crit.).

*Atticora cyanoleuca* (not *Hirundo cyanoleuca* Vieillot) Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 984—Arequipa (spec. in British Museum examined); idem, l.c., 1868, p. 568—Arequipa (spec. examined); Taczanowski, l.c., 1874, p. 510—part, Lima; idem, l.c., 1879, p. 224—part, Pacasmayo; idem, Orn. Pér., 1, p. 244, 1884—part, Lima; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 186, 634, 1885—part, spec. k, m, r', Arequipa (spec. examined); idem and Wyatt, Monog. Hirund., 2, p. 505, 1889—part, coast of Peru (Pacasmayo, Lima, Arequipa).

*Atticora cyanoleuca montana* (not of Baird) Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Lima and Ica.

(?) *Pygochelidon patagonica (peruviana* Chapman?) Chapman, Bull. Amer. Mus. N. H., 55, p. 557, 1926—Jambeli Island, southwestern Ecuador (crit.).

**Range.**—Coast district of Peru, from Libertad (Pacasmayo, Trujillo) south to Moquegua; (?) southwestern Ecuador (Jambeli Island, off Machala).

2: Peru (Santa Eulalia, 1; Matucana, 1).

### Genus NOTIOCHELIDON Baird<sup>1</sup>

*Notiochelidon* Baird, Rev. Amer. Bds., 1, p. 306, May, 1865—type, by orig. desig., *Atticora pileata* Gould.

#### \**Notiochelidon pileata* (Gould). COBAN SWALLOW.

*Atticora pileata* Gould, Proc. Zool. Soc. Lond., 26, p. 355, Nov., 1858—Guatemala (type in collection of J. Gould, now in the British Museum); Sclater and Salvin, Ibis, 1859, p. 13—Guatemala; Baird, Rev. Amer. Bds., 1, p. 307, 1865—Coban, Vera Paz (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 230, pl. 15, fig. 2, 1883—Coban, Quiché, Totonicapam, Quezaltenango, Barranco de Los Chocoyos, Calderas, ridge above Barsinas, Villa Lobos, and Aceytuno, Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 188, 635, 1885—Coban, Guatemala; Sharpe and Wyatt, Monog. Hirund., 2, p. 513, pl. 100, 1887—Guatemala (monog.).

*Notiochelidon pileata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 66, 1904—Guatemala (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 123, 1907—Tecpan; Griscom, Bull. Amer. Mus. N. H., 64, p. 284, 1932—Zanjon, Momostenango, Chichicastenango, Nebaj, Volcan San Lucas, Antigua, Panajachel, and La Montañita, Guatemala.

**Range.**—Highlands of Guatemala.

1: Guatemala (Tecpan, 1).

<sup>1</sup> This genus comes very close to *Atticora*, differing principally by the lesser development of the tibial feathers, and is hardly worthy of recognition.

## Genus ATTICORA Boie

*Atticora* Boie, Isis, 1844, p. 172—type, by subs. desig. (Gray, Cat. Gen. Subgen. Bds., p. 13, 1855), *Hirundo fasciata* Gmelin.

*Diplochelidon* Ridgway, Proc. Biol. Soc. Wash., 16, p. 106, 1903—type, by orig. desig., *Hirundo melanoleuca* Wied.

\**Atticora fasciata* (Gmelin). WHITE-BANDED SWALLOW.

*Hirundo fasciata* Gmelin, Syst. Nat., 1, (2), p. 1022, 1789—based on “Hirondelle à ceinture blanche” Buffon and Daubenton, Pl. Enl., pl. 724, fig. 2, Cayenne; Swainson, Zool. Ill., (2), 1, pl. 17, 1829—Cayenne; Schomburgk, Reisen Brit. Guiana, 1, pp. 178, 294, 1847—Barima and Essequibo rivers, British Guiana.

*Atticora fasciata* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, “1848,” p. 672, 1849—Barima and Barama rivers; Burmeister, Syst. Uebers. Th. Bras., 3, p. 146, 1856—northern Brazil, near Pará, and Guiana; Sclater, Cat. Coll. Amer. Bds., p. 39, 1862—Cayenne; Baird, Rev. Amer. Bds., 1, p. 306, 1865—Cayenne; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 178—upper Ucayali, Peru; idem, l.c., 1867, p. 569—Rio Negro, Brazil; idem, l.c., 1867, p. 749—Yurimaguas, Peru; Pelzeln, Orn. Bras., 1, p. 18, 1868—Rio Guaporé, above Tres Barras, and Rio Negro (Lamalonga); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 258—upper Ucayali, Yurimaguas, and lakes of Santa Cruz, Peru (crit.); idem, l.c., 1879, p. 595—Yuyo, Cangalli, and Yungas, Bolivia; Taczanowski, l.c., 1882, p. 8—Yurimaguas, Peru; idem, Orn. Pér., 1, p. 244, 1884—Peruvian localities; Salvin, Ibis, 1885, p. 205—Merumé Mountains and Atapuraw River, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 183, 634, 1885—Ecuador (Sarayacu, Copataza River), Cayenne, British Guiana (Merumé Mountains, River Atapuraw), Rio Negro, Peru (upper Ucayali, Yurimaguas, Chanchamayo), and Bolivia (Cangalli, Yuyo); Sharpe and Wyatt, Monog. Hirund., 2, p. 495, pl. 95, 1889 (monog.); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 333—La Merced, Chanchamayo, Peru; Goeldi, Ibis, 1897, pp. 154, 159—Counany, Brazil; idem, Ibis, 1903, p. 499—Rio Capim; Berlepsch and Hartert, Nov. Zool., 9, p. 15, 1902—Mato River and Nicare, Caura, Venezuela; Snethlage, Journ. Orn., 56, p. 9, 1908—Bom Lugar, Rio Purús; Berlepsch, Nov. Zool., 15, p. 110, 1908—Cayenne; Hellmayr, l.c., 17, p. 269, 1910—Maroins, Rio Machados (crit.); idem, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Rio Capim; Snethlage, Bol. Mus. Goeldi, 8, p. 470, 1914—Rio Capim, Counany, and Rio Purús (Bom Lugar); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 162, 1916—Caura Valley and Mato River, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 504, 1917—La Morelia, Colombia; Chubb, Bds. Brit. Guiana, 2, p. 345, 1921—Kurubung River, Roraima, Caramang River, Merumé Mountains, Hoorie River, Aremu River, and Abary savannas; Chapman, Bull. U. S. Nat. Mus., 117, p. 101, 1921—Rio Cosireni, Urubamba, Peru; idem, Bull. Amer. Mus. N. H., 55, pp. 555, 736, 1926—Curaray junction of Rio Napo, Ecuador; Naumburg, l.c., 60, p. 318, 1930—Rio Roosevelt, Matto Grosso.

*Range*.—French and British Guiana; southern Venezuela (Caura Valley); the Amazonian basin from the Rio Capim and the Counany westwards, south to northern Matto Grosso (Rio Roosevelt); south-eastern Colombia (La Morelia, Caquetá); eastern Ecuador; eastern Peru; and northeastern Bolivia (Yuyo and Cangalli, Dept. La Paz).<sup>1</sup>

5: British Guiana, 1; Brazil (Serra da Lua, Rio Branco, 2); Peru (San Ramón, 1; Yurimaguas, 1).

**\**Atticora melanoleuca* (Wied).<sup>2</sup> BLACK-COLLARED SWALLOW.**

*Hirundo melanoleuca* Wied, Reise Bras., 1, p. 345 (8vo ed., p. 342), 1820—Rio Belmonte, Bahia, Brazil (type in collection of Prince Wied, now in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 216, 1889); Temminck, Nouv. Rec. Pl. Col., livr. 35, pl. 209, fig. 2, 1823—Brazil (fig. of type in Wied Collection); Wied, Beitr. Naturg. Bras., 3, (1), p. 371, 1830—Rio Grande de Belmonte; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 672, "1848"—British Guiana.

*Atticora melanoleuca* Burmeister, Syst. Uebers. Th. Bras., 3, p. 146, 1856—Rio Belmonte (ex Wied); Pelzeln, Orn. Bras., 1, p. 18, 1868—Borda do Matto do "Paranaiva" [=Paranahyba] (Goyaz), Forte do Principe (Rio Guaporé), Bananeira (Rio Mamoré), Salto Theotonio (Rio Madeira), Rio Negro, and Marabitanas, Brazil (spec. examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 185, 1885—Forte do Principe; Sharpe and Wyatt, Monog. Hirund., 2, p. 503, pl. 98, 1888 (monog.); Berlepsch and Hartert, Nov. Zool., 9, p. 15, 1902—Orinoco River (Caicara and Altagracia) and Caura Valley (La Pricion, La Union), Venezuela (spec. examined); Hellmayr, Nov. Zool., 17, p. 269, 1910—Salto Theotonio, Rio Madeira; Sneath, Bol. Mus. Goeldi, 8, p. 470, 1914—Rio Tocantins (Arumatheua), Rio Jamauchim (Cahy, Recreio), and Rio Xingú, Brazil; Chubb, Bds. Brit. Guiana, 2, p. 346, 1921—Ireng River, Ituribisci, Arawai, Kamakabra, and Makauria River.

*Diplochelidon melanoleucus(a)* Ihering and Ihering, Cat. Faun. Braz., 1, p. 341, 1907 (range); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 161, 1916—Caicara, Orinoco (habits, nest, and eggs); Naumburg, Bull. Amer. Mus. N. H., 60, p. 318, 1930—Rio Branco, Matto Grosso.

<sup>1</sup> This swallow is possibly divisible into two races, birds from south of the Amazon being somewhat smaller with less deeply forked tail, the upper parts less purplish blue, and the white pectoral band slightly wider. The available series is, however, not large enough to make sure of this distinction.

*Additional material examined*.—French Guiana: Cayenne, 2.—British Guiana: Merumé Mountains, 1.—Venezuela: Caura Valley, 4.—Brazil: Maroins, Rio Machados, 2; Rio Guaporé, 1.—Peru: Chaquimayo, Carabaya, 1.

<sup>2</sup> Generic separation of this swallow seems to me unwarranted. The only divergency of importance lies in the shape of the lateral rectrices, which are more elongated as well as more attenuated, producing a more deeply forked tail. I am unable to appreciate the alleged difference in the degree of adhesion of the toes.

*Range*.—British Guiana; southern Venezuela (Orinoco-Caura basin); and the greater part of Brazil, east to the Rio Tocantins, south to Bahia (Rio Grande de Belmonte), Goyaz (Borda do Matto, Rio Paranyhyba), and Matto Grosso (Rio Branco).<sup>1</sup>

2: British Guiana (Mazaruni River, 2).

### Genus **OROCHELIDON** Ridgway<sup>2</sup>

*Orochelidon* Ridgway, Proc. Biol. Soc. Wash., 16, p. 106, 1903—type, by orig. desig., *Petrochelidon murina* Cassin.

#### \**Orochelidon murina* (Cassin). BROWN-BELLIED SWALLOW.

*Petrochelidon murina* Cassin, Proc. Acad. Nat. Sci. Phila., 6, p. 370, 1853—Republic of Ecuador (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 36, 1899); Sclater, Proc. Zool. Soc. Lond., 28, p. 74, 1860—Quito, Ecuador (nest and egg).

*Atticora cyanophaea* Cabanis, Journ. Orn., 9, p. 92, 1861—Santa Fé de Bogotá, Colombia (type in Berlin Museum examined).

*Atticora cinerea* (not *Hirundo cinerea* Gmelin<sup>3</sup>) Sclater, Cat. Coll. Amer. Bds., p. 39, 1862—Quito; Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 599—Tinta, Peru (spec. examined); Taczanowski, l.c., 1874, p. 510—between Cucas and Palcamayo, Junín, Peru; idem, l.c., 1882, p. 8—Tamiapampa, Peru; Allen, Bull. Mus. Comp. Zool., 3, p. 353, 1876—Moho, Lake Titicaca, Dept. Puno, Peru; Taczanowski, Orn. Pér., 1, p. 243, 1884—Peru; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 184, 634, 1885—part, descr. "adult" and spec. a-h, l, m, n, p, Bogotá, Quito, Sical (Ecuador), and Tinta (Peru); Sharpe and Wyatt, Monog. Hirund., 2, p. 499, pl. 96, right fig., 1892—part, descr. "adult" and hab., Colombia, Ecuador, and Peru (Tinta); Salvin, Nov. Zool., 2, p. 4, 1895—Cajabamba and near Cajamarca, Peru; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 11, 1899—Pun, Laguna de Kingora (Sig-sig), Cañar, and Lloa, Ecuador; Goodfellow, Ibis, 1901, p. 316—Nanegal (spec. examined); Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 72, 1928—Cerro Mojanda, Ecuador.

<sup>1</sup> A single adult from southern Brazil (Borda do Matto, Goyaz), except in having a slightly wider pectoral band and more glossy upper parts, agrees well with more northern examples.

*Material examined*.—Brazil: Borda do Matto, Rio Paranyhyba, Goyaz, 1; Bananeira, Rio Mamoré, 1; Salto Theotônio, Rio Madeira, 1; Rio Negro, between Thomar and Santa Izabel Nova, 1; Marabitanas, 1.—Venezuela: Altagracia, Rio Orinoco, 1; Caicara, Rio Orinoco, 5; La Pricion, Caura Valley, 8; La Union, Caura Valley, 4.

<sup>2</sup> This genus is closely allied to *Atticora*, but seems to be separable by differently shaped tail, free sub-basal phalanx of middle toe, and other peculiarities.

<sup>3</sup> *Hirundo cinerea* Gmelin (Syst. Nat., 1, (2), p. 1026, 1789), based on "L'Hirondelle du Pérou" Brisson (Orn., 2, p. 498, 1760) and "La Petite Hirondelle noire, à ventre cendré" of Buffon, both being founded on "*Hirundo minima* Peruviana, cauda bicorni" Feuillee (Journ. Observ. Phys., ed. 1725, p. 33), is too vaguely described to be referred to the above species. Cf. Baird, Rev. Amer. Bds., 1, p. 312, 1865, and Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287.

*Atticora murina* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287—Ticsan, Ecuador; Berlepsch and Stolzmann, l.c., 1896, p. 333—Acobamba, Peru; Hartert, Nov. Zool., 5, p. 480, 1898—Cayambe, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 65, 1911—Tumbaco, Ecuador.

*Orochelidon murina* Chapman, Bull. Amer. Mus. N. H., 36, p. 504, 1917—western Andes (Paramillo) and eastern Andes (El Piñon, La Herrera, Puente Andalucia, Suba), Colombia; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 10, 1920—Ollachea, near Macusani, Dept. Puno, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 101, 1921—Ollantaytambo, Matchu Picchu, and La Raya, Urubamba, Peru; idem, Bull. Amer. Mus. N. H., 55, p. 555, 1926—above Chambo, Hacienda Garzón, El Corazón, Valle de Cumbaya, Chimborazo, Pichincha, and Quito, Ecuador (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 398, 1930—mountains near Huánuco, Peru (crit.).

*Orochelidon murina cyanophaea* Todd and Carriker, Ann. Carnegie Mus., 14, p. 436, 1922—San Lorenzo, Santa Marta Mountains, Colombia (crit.).

*Range*.—Temperate zone of Colombia, Ecuador, and Peru, south to Puno.<sup>1</sup>

3: Colombia (Puente Andalucia, 1); Peru (near Leimabamba, 1; Huánuco Mountains, Huánuco, 1).

### Genus RIPARIA Forster

*Riparia* Forster, Syn. Cat. Brit. Bds., p. 17, 1817—type, by monotypy, *Riparia europaea* Forster = *Hirundo riparia* Linnaeus.

*Clivicola* Forster, Syn. Cat. Brit. Bds., p. 55, 1817—type, by monotypy, *Clivicola europaea* Forster = *Hirundo riparia* Linnaeus.

*Cotile* Boie, Isis, 1822, (1), p. 550—type, by monotypy, [*C.*] *riparia* = *Hirundo riparia* Linnaeus.

*Cotyle* Boie, Isis, 1826, (2), p. 971—type, by subs. desig. (Gray, List Gen. Bds., p. 9, 1840), *Hirundo riparia* Linnaeus.

### \**Riparia riparia riparia* (Linnaeus). BANK SWALLOW.

*Hirundo riparia* Linnaeus, Syst. Nat., 10th ed., 1, p. 192, 1758—"in Europae collibus arenosis abruptis"; restricted type locality, Sweden.

<sup>1</sup> In agreement with Chapman I am unable to appreciate any racial variation in this species. The more bluish or greenish gloss alluded to in my paper on Watkins's Peruvian collections appears to be a purely accidental feature, as it is not borne out by additional material since examined. The type of *A. cyanophaea* Cabanis, an adult bird from Bogotá, does not differ in any way from various Peruvian and Ecuadorian examples, nor can series from Colombia on one side and from Ecuador and Peru on the other be distinguished by the coloration of the under parts or any other character. What Sharpe described and figured as "*Atticora murina*, juv.," is not the present bird, but *Petrochelidon a. andecola*.

*Additional material examined*.—Colombia: Bogotá, 5; El Piñon, 4.—Ecuador: Cayambe, 2; Tumbaco, 1; Mojanda, 3; Corazón, 1; "Nanegal," 1.—Peru: Tinta, Dept. Cuzco, 3 (male, May 22, 1868; female and unsexed adult, April 1, 1869); Ollachea, twenty miles north of Macusani, Dept. Puno, 6.



*Riparia europaea* Forster, Syn. Cat. Brit. Bds., p. 17, 1817—new name for *Hirundo riparia* Linnaeus.

*Hirundo cinerea* (not of Gmelin, 1789) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 526, 1817—based mainly on Daubenton, Pl. Enl., pl. 543, fig. 2; Europe, chiefly France.

*Cotyle fluvialilis* Brehm, Handb. Naturg. Vög. Deutschl., p. 142, 1831—river banks of middle Germany, especially those of the Saale.

*Chelidon microrhynchos* Brehm, Handb. Naturg. Vög. Deutschl., p. 143, 1831—probably "north of Germany."

*Clivicola riparia cinerea* Stejneger, Bull. U. S. Nat. Mus., 29, p. 268, 1885—North America (crit.).

*Clivicola riparia maximiliani* Stejneger, Bull. U. S. Nat. Mus., 29, p. 378 (footnote), 1885—new name for *Clivicola riparia cinerea* Stejneger.

*Riparia riparia fuscocollaris* Tschusi, Orn. Jahrb., 23, p. 216, Dec., 1912—Castelnuovo, Dalmatia (type in coll. of Tschusi ii, now in Munich Museum, examined).

*Cotile riparia* Pelzelin, Orn. Bras., 1, p. 18, 1868—Caçara, Matto Grosso, and Marabitanas, Rio Negro, Brazil (spec. examined); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 240, 1883 (monog.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 96, 1885 (monog.).

*Cotile riparia* Baird, Rev. Amer. Bds., 1, p. 319, 1864—North America (crit.); Salvin, Ibis, 1866, p. 192—Dueñas, Guatemala; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 258—Nauta, Peru.

*Clivicola riparia* Cory, Bds. W. Ind., p. 73, 1889—Cuba, Jamaica; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 76, 1910—Joazeiro, Bahia (spec. examined).

*Riparia riparia* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 73, 1904 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 788, 1910—Los Cuádras de Irazú, San José, Los Cuadros de San Pedro, and Juan Vías, Costa Rica; Worthington, l.c., 7, p. 459, 1911—Abaco, Bahama Islands (sight record); Todd, l.c., 10, p. 259, 1916—Isle of Pines (occurrence doubtful); Chapman, Bull. Amer. Mus. N. H., 36, p. 501, 1917—Cali, Colombia; Chubb, Bds. Brit. Guiana, 2, p. 323, 1921—Bartica Grove; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 167, 1925—Joazeiro, Bahia; Dabbene, El Hornero, 3, p. 391, 1926—Concepción, Tucumán (March 2); Griscom, Bull. Mus. Comp. Zool., 72, p. 358, 1932—Obaldia, Panama (Oct. 2–17).

*Riparia riparia riparia* Barbour, Mem. Nutt. Orn. Cl., 6, p. 111, 1923—Cardenas, Cuba; Struthers, Auk, 40, p. 475, 1923—Anegado Lagoon, Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 112, 1926—Cartagena and Anegado Lagoons, Porto Rico; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 472, 1927—Porto Rico; idem and Swales, Bull. U. S. Nat. Mus., 155, p. 318, 1931—Haiti (ex Ritter); Naumburg, Bull. Amer. Mus. N. H., 60, p. 314, 1930—Tapirapoan, Matto Grosso, Brazil.

**Range.**—Breeds in North America from northern Alaska and northern Quebec south to southern California, Arizona, Texas,

central Alabama, and Virginia; migrates through Mexico, Central America, and the West Indies (scattered records from Jamaica, Cuba, Porto Rico, and Haiti) to Colombia (Cali, Feb. 6), Peru (Nauta), British Guiana (Bartica Grove), Brazil (Marabitanas, Rio Negro; Caiçara and Tapirapoan, Matto Grosso; Joazeiro, Rio São Francisco, Bahia), and Argentina (Concepción, Tucumán; March 2); breeds also in Europe and Siberia, wintering in Africa and India.<sup>1</sup>

22: New York (Cayuga, 1; Piermont, 1; Shelter Island, 6); New Jersey (Englewood, 1); Illinois (Chicago, 2; Lake Forest, 1; Libertyville, 1; Mound City, 1; Olive Branch, 1); Wisconsin (Beaver Dam, 5); Arizona (Calabasas, 1); Venezuela (Encontrados, Zulia, 1).

### Genus *HIRUNDO* Linnaeus

*Hirundo* Linnaeus, Syst. Nat., 10th ed., 1, p. 191, 1758—type, by subs. desig. (Gray, List Gen. Bds., p. 8, 1840), *Hirundo rustica* Linnaeus.

*Chelidon* Forster, Syn. Cat. Brit. Bds., p. 17, 1817—type, by monotypy, *Chelidon procne* Forster = *Hirundo rustica* Linnaeus.

### *Hirundo rustica rustica* Linnaeus. EUROPEAN SWALLOW.

*Hirundo rustica* Linnaeus, Syst. Nat., 10th ed., 1, p. 191, 1758—"in Europa," restr. type locality, Sweden; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 79, 1904 (monog., bibliog.).

*Hirundo rustica* L., *typica* Winge, Vidensk. Medd. Naturhist. Foren. for 1895, p. 64, 1896—Sydprøven, Greenland (June 12, 1882); idem, Medd. Grønland, 21, p. 273, 1898—Sydprøven, south of Julianehaab (June 12, 1882).

*Range*.—Palearctic region, wintering in India, China, the Malay Peninsula, and Africa; accidental in Greenland (two records, one from Sydprøven, near Julianehaab, June 12, 1882, and another from an unspecified locality).

### \**Hirundo rustica erythrogaster* Boddaert. BARN SWALLOW.

<sup>1</sup> North American birds generally have shorter wings and less deeply forked tails, as has been pointed out by Baird and Stejneger, but the divergency does not seem to be constant enough to justify the recognition of a separate race, for which the name *R. r. maximiliani* Stejneger would be available.

A. M. Bailey (Auk, 46, p. 551, 1929) records *R. r. ijimae* Lönnberg (Journ. Coll. Sci. Tokyo, 23, art. 14, p. 38, 1908—Saghalin; type in Stockholm Museum) from Point Barrow, Alaska, on the basis of a single juvenile example taken on Sept. 15, 1928. The distinguishing characters of this supposed form, however, are so slight, judging from a series from Petropawlowsk, Kamchatka, and other localities in eastern Siberia, that certain identification of a single individual must be open to serious doubt.

*Additional American material examined*.—Pennsylvania: Williamsport, 2.—Illinois: Chicago, 1.—Brazil: Joazeiro, Bahia, 2; Caiçara, Matto Grosso, 1.

*Hirundo erythrogaster* Boddaert, Tabl. Pl. Enl., p. 45, Dec., 1783—based on "Hirondelle à ventre roux de Cayenne" Daubenton, Pl. Enl., pl. 724, fig. 1, Cayenne; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 232, 1883; Snethlage, Bol. Mus. Goeldi, 8, p. 469, 1914—Pará, Santo Antonio do Prata, Marajó (São Natal), Mexiana, Rio Jamundá (Faro); Griscom, Bull. Amer. Mus. N. H., 64, p. 283, 1932—Guatemala.

*Hirundo rufa* Gmelin, Syst. Nat., 1, (2), p. 1018, 1789—based on Daubenton, Pl. Enl., pl. 724, fig. 1, and "Rufous-bellied Swallow" Latham, Gen. Syn. Bds., 2, (2), p. 566; Cayenne and New York.

*Hirundo horreorum* Barton, Fragm. Nat. Hist. Penn., p. 17, 1799—Pennsylvania.

*Hirundo americana* (not of Gmelin, 1789) Wilson, Amer. Orn., 5, p. 34, pl. 38, figs. 1, 2, 1812—Pennsylvania (type in Peale's Museum).

*Hirundo cyanopyrra* [sic] Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 510, 1817—based on "Hirondelle bleue et rousse" Sonnini, Oeuvr. Buffon, 55, p. 212, French Guiana, and "Golondrina vientre roxizo" Azara, No. 302, Paraguay, between 27° and 29° lat. (December and September).

*Hirundo fumaria* Lichtenstein, Preis-Verz. Säug., Vögel, etc., Mexico, p. 2, 1830—new name for *Hirundo americana* Wilson.

*Hirundo erythrogastra unalaschkensis* (not *Hirundo unalaschkensis* Gmelin<sup>1</sup>) W. Palmer, Fur Seals and Fur-Seal Is. North Pacif. Ocean, 3, p. 422, 1899—Pribilof Islands and Unalaska (crit.); Allen, Auk, 18, p. 176, 1901 (crit.).

*Hirundo erythrogastra palmeri* Grinnell, Condor, 4, p. 71, 1902—Amaknak Island, Unalaska Harbor, Alaska (type in collection of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley).

*Hirundo erythrogastra* Pelzeln, Orn. Bras., 1, p. 18, 1868—Minas, Matto Grosso (Engenho do Gama), and Rio Negro (Marabitanas); Salvin, Proc. Zool. Soc. Lond., 1883, p. 420—Callao, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 137, 1885 (monog., excluding records from Lake Baikal, Burma, and Cochin China); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Lima and Ica, Peru (crit.); Sharpe and Wyatt, Monog. Hirund., 1, p. 253, pl. 42, 1893 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 80, 1904 (monog., full bibliog.); Ihering, Cat. Faun. Braz., 1, p. 340, 1907 (winter range); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 351, 1910 (winter range in Argentina).

*Hirundo rustica erythrogastra* Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 76, 1910—Joazeiro, Bahia.

*Hirundo rustica erythrogaster* Naumburg, Bull. Amer. Mus. N. H., 60, p. 315, 1930—Matto Grosso; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 47, 1932—Chile (winter visitor).

<sup>1</sup>*Hirundo unalaschkensis* Gmelin, Syst. Nat., 1, (2), p. 1025, 1789—based on "Aoonalashka Swallow" Latham, Gen. Syn. Bds., 2, (2), p. 571; Aoonalashka (type in the Leverian Museum). This species is utterly unidentifiable. The type did not come to the Vienna Museum.

*Hirundo rustica* var. *horreorum* Winge, Medd. Grønland, 21, p. 273, 1898—Greenland (Frederikshaab, Nanortalik, Godhavn, Umanak and Jakobshavn).

**Range.**—Breeds from Alaska, northern Mackenzie (Great Bear Lake), southern Manitoba, and Quebec south to southern California, Texas, northern Arkansas, Tennessee, northern Alabama, and North Carolina, and in Mexico south to Jalisco and Nayarit; migrates through the Bahamas and the West Indies and winters from Mexico to Brazil, Paraguay, Argentina,<sup>1</sup> and Chile; accidental in Greenland, the Galapagos, and Bermuda.<sup>2</sup>

55: Maine (Upton, 1); Connecticut (East Hartford, 2); New York (Peterboro, 2; Ellicottville, 1; Shelter Island, 2); New Jersey (Englewood, 1); North Carolina (Raleigh, 1); Wisconsin (Beaver Dam, 10); Indiana (Bluffton, 1); Illinois (Chicago, 2); Texas (Galveston, 1; Fort Davis, 1); New Mexico (Silver City, 1; Mimbres, 3); California (Santa Monica Canyon, 1); Mexico (Babicora, Chihuahua, 1; Yucatan, 1); Bahama Islands (Cay Sal, 4; Mariguana, 1); West Indies (Cayman Brac, 2; Grand Cayman, 4); Costa Rica (Limón, 1; San José, 1); Venezuela (Encontrados, Zulia, 4); Brazil (below Teffé, 1; Serra da Lua, Rio Branco, 2); Peru (Pacasmayo, 1); Chile (Ramadilla, Atacama, 2).

### Genus *DELICHON* Moore<sup>3</sup>

*Delichon* Moore, Proc. Zool. Soc. Lond., 22, "1854," p. 104, pub. April, 1855—type, by monotypy, *Delichon nipalensis* Moore.

*Chelidonaria* Reichenow, Journ. Orn., 37, p. 187, 1889—type, by orig. desig., *Hirundo urbica* Linnaeus.

### *Delichon urbica urbica* (Linnaeus). EUROPEAN MARTIN.

*Hirundo urbica* Linnaeus, Syst. Nat., 10th ed., 1, p. 192, 1758—"in Europa," restr. type locality, Sweden.

<sup>1</sup> The American Barn Swallow extends its winter migration to the southern extremity of South America, as is shown by an adult male in the British Museum secured by P. W. Reynolds on Dec. 11, 1929, at Viamonte, Tierra del Fuego.

<sup>2</sup> Records of *H. rustica tyleri* Jerdon from America (Dueñas, Guatemala; "Pará") are due to Sharpe's misidentification of certain unusually dark-bellied individuals of the American Barn Swallow. A specimen taken by Natterer at Rio de Janeiro and one of those collected by Reiser at Joazeiro, Bahia, could easily be referred to that form, were it not for the fact that similar examples occur also in the United States. There is no reason to assume that the so-called "*tyleri*" are anything but migrants from North America. *H. r. erythrogaster* and *H. r. tyleri*, moreover, are very close to each other, single birds being often quite indistinguishable.

<sup>3</sup> I do not see sufficient grounds for generic separation of the European Martin from *D. nipalensis*, type of the genus *Delichon*.

*Chelidon urbica* Helms, Vidensk. Medd. Naturhist. Foren., (6), 6, p. 111, 1904—Sermilikfjord, East Greenland (June 13, 1902).

*Range*.—Europe and western Asia, winters in Africa and north-western India; accidental in Greenland (one record from Sermilikfjord, on the east coast; June 13, 1902).

### Genus IRIDOPROCNE Coues

*Iridoprocne* Coues, Bds. Colorado Valley, 1, p. 412 (in text), 1878—type, by orig. desig., *Hirundo bicolor* Vieillot.

#### \**Iridoprocne bicolor* (Vieillot). TREE SWALLOW.

*Hirundo bicolor* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 61, pl. 31, 1808—"au centre des Etats-Unis"; New York accepted as type locality (type in collection of P. L. Vieillot).

*Hirundo viridis* Wilson, Amer. Orn., 5, p. 44, pl. 38, fig. 3, 1812—Pennsylvania (type in Peale's Museum, doubtless lost).

*Hirundo leucogaster* Stephens, in Shaw, Gen. Zool., 10, (1), p. 106, 1817—new name for *Hirundo viridis* Wilson.

*Hirundo prasina* Lichtenstein, Preis-Verz. Säug., Vögel, etc., Mexico, p. 2, 1830—new name for *Hirundo viridis* Wilson; Cabanis, Journ. Orn., 11, p. 58, 1863 (reprint).

*Hirundo bicolor* var. *vespertina* Cooper, Amer. Natur., 10, p. 91, Feb., 1876—"Haywood" [=Haywards], Alameda County, California (no type extant; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 287, 1932).

*Tachycineta bicolor* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 117, 631, 1885 (monog.); Sharpe and Wyatt, Monog. Hirund., 1, p. 155, pl. 24, 1889 (monog.).

*Iridoprocne bicolor* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 87, 1904 (monog., full bibliog.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 111, 1923—Cuba; Peters, Bull. Mus. Comp. Zool., 69, p. 456, 1929—Tolosa, Honduras.

*Range*.—North America, from northwestern Alaska, Mackenzie, northern Manitoba, and northern Quebec to southern California, Colorado, Kansas, northeastern Arkansas, and Virginia; winters from central California, southern Texas, coast region of the Gulf and South Atlantic states, and North Carolina (frequently to New Jersey) south over Mexico and Guatemala to Honduras and Cuba.

44: Connecticut (East Hartford, 5); Massachusetts (Dedham, 1; near Boston, 1); New York (Jamaica Bay, 1; Cayuga, 2); Indiana (Davis Station, 2); Illinois (Fox Lake, 1; Lewistown, 1); Wisconsin (Beaver Dam, 7); Florida (Wilson, 5; Key West, 3; Nassau County, 3; Gainesville, 1; Banana River, 1; Tamiami Trail, 1); Texas (Corpus Christi, 2); California (Chaparral, 1; Monterey, 4); Canada (Prince Albert, Saskatchewan, 1); Guatemala (Panajachel, Lake Atitlan, 1).

**\**Iridoprocne albilinea*<sup>1</sup> *albilinea* (Lawrence). MANGROVE SWALLOW.**

- Petrochelidon albilinea* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 2, May, 1863—Panama (type in collection of Geo. N. Lawrence, now in the American Museum of Natural History, New York); Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 347—Isthmus of Panama; Salvin, Ibis, 1866, p. 192—Guatemala to Panama.
- Petrochelidon littorea* Salvin, Proc. Zool. Soc. Lond., 1863, p. 189—"low rivers and seacoasts of both oceans, from Belize to Colon on the Atlantic, and from Soconusco to Panama on the Pacific" (type from Belize, British Honduras, in Salvin-Godman Collection, now in British Museum; cf. Sharpe, Cat. Bds. Brit. Mus., 10, p. 631, 1885).
- Petrochelidon leucoptera* (not *Hirundo leucoptera* Gmelin) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 317, 1862—Panama.
- Hirundo albilinea* Baird, Rev. Amer. Bds., 1, p. 300, 1865—Mazatlan, San José (Guatemala), and Panama (crit.).
- Tachycineta albilinea* Lawrence, Mem. Bost. Soc. N. H., 2, p. 271, 1874—Mazatlan (habits); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 235, pl. 15, fig. 1, 1883—Mexico (Mazatlan), British Honduras (Belize River and Cayo), Guatemala (Peten, Yaxha, Rio Dulce, Huamuchal, Chiapam, San José), Salvador (La Union), Honduras (Amapala), Nicaragua (Corinto), Costa Rica, and Panama (Panama, Matachin); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 115, 631, 1885—part, a-c, e-k, Vera Cruz (Mexico), Belize River (British Honduras), Chiapam (Guatemala), Puntarenas (Costa Rica), Panama; idem and Wyatt, Monog. Hirund., 1, p. 149, pl. 22, 1887 (monog., excl. Chepen, Peru); Salvin, Ibis, 1888, p. 257—Meco and Holbox Islands, off Yucatan; Stone, Proc. Acad. Nat. Sci. Phila., 1890, p. 210—Progreso, Yucatan; Richmond, Proc. U. S. Nat. Mus., 16, p. 486, 1893—Rio Frío, Costa Rica; Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Rio Grande de Térraba between Lagarto and Palmar, Costa Rica; Bangs, Auk, 18, p. 368, 1901—David, Chiriquí; idem, Bull. Mus. Comp. Zool., 39, p. 152, 1903—Ceiba and Yaruca, Honduras.
- Iridoprocne albilinea* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 90, 1904—coast districts of Mexico (Vera Cruz and Sinaloa) to Panama (monog., excl. northern Peru); Miller, Bull. Amer. Mus. N. H., 21, p. 134, 1905—Escuinapa, Sinaloa; Carriker, Ann. Carnegie Mus., 6, p. 787, 1910—Limon, La Junta, and El Pózo de Térraba, Costa Rica; Rendahl, Ark. Zool., 12, No. 8, p. 35, 1919—San Carlos, Rio Ometepe, Muyogalpa, and Isla de Vela, Nicaragua; Griscom, Amer. Mus. Nov., 235, p. 15, 1926—eastern Quintana Roo; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 37, 1927—San Blas, Nayarit; Austin, Bull. Mus. Comp. Zool., 69, p. 385, 1929—Belize River and El Cayo, British Honduras; Peters, l.c., 71, p. 329, 1931—Changuinola, Panama; van Rossem, Trans. San Diego Soc. N. H., 6, p. 268, 1931—Tóbari Bay, Agiabampo,

<sup>1</sup> *Iridoprocne albilinea* (Lawrence) is probably conspecific with *I. albiventer*, but I am unwilling to reduce it to subspecific rank until we have become better acquainted with its southern representative, *I. a. stolzmanni*.

Lobos Island, and Guásimas Lagoon, Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 282, 1932—Ocos and San José, Guatemala.

*Iridoprocne albilineata* Bangs, Auk, 24, p. 305, 1907—Barránca de Puntarenas, Costa Rica; Peters, Auk, 30, p. 377, 1913—Camp Mengel, Quintana Roo; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 270, 1918—Gatun, Panama.

**Range.**—Coast districts of Mexico, from Sonora on the Pacific, and from southern Tamaulipas (Tampico) on the Atlantic side, south through Central America (both coasts) to the Isthmus of Panama.

14: Mexico (Tampico, Tamaulipas, 2; Rio Lagartos, Yucatan, 2; Holbox Island, 3); Nicaragua (San Emilio, Lake Nicaragua, 1); Costa Rica (Punta Piedras, Guanacaste, 4); Panama (Balboa, 2).

***Iridoprocne albilinea stolzmanni* (Philippi).<sup>1</sup> STOLZMANN'S SWALLOW.**

*Hirundo leucopygia* (not *H. leucopyga* Meyen, 1834) Taczanowski (ex Stolzmann MS.), Proc. Zool. Soc. Lond., 1880, p. 192—Chepen, Dept. Libertad, Peru (type lost, formerly in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 152, 1927); idem, Orn. Pér., 1, p. 240, 1884—Chepen; idem, l.c., 3, p. 503, 1886 (excl. synon.).

*Hirundo stolzmanni* Philippi, Anal. Mus. Nac. Chile, Zool., 15, p. 23 (in text), 1902—new name for *Hirundo leucopygia* Taczanowski, preoccupied.

<sup>1</sup> *Iridoprocne albilinea stolzmanni* (Philippi): Similar to *I. a. albilinea* in the restriction of the white wing-markings to comparatively narrow edges on the tertials and adjoining inner secondaries, but easily distinguished by very much smaller, apically more constricted, bill; absence of the white supraloral streak; duller and less bluish, and over green rather than lily green gloss on pileum and mantle, the latter with the basal portion of the feathers grayish instead of white; duller and more brownish, chaetura drab rather than chaetura black outer wing coverts, remiges, and rectrices; grayish brown instead of glossy metallic bluish green upper tail coverts; decidedly grayish under parts, particularly on the breast, with the dusky shaft-streaks more numerous as well as more conspicuous; and smoke gray, instead of nearly white axillaries and under wing coverts. The uropygial band also is more shaded with grayish and more strongly streaked with dusky. Wing (one unsexed adult), 92; tail, 48; furca, 6½; bill, 5½.

Although I have but one specimen, an adult bird just completing its annual molt, there is no question that *stolzmanni* constitutes an excellent local form of *I. albilinea*, its habitat being separated from the range of its ally by thousands of miles. The exceedingly small bill which, in bulk, is less than half as large as that of the Mangrove Swallow, serves to distinguish it at a glance. It is hard to conceive how Sharpe could mistake it for the "immature" plumage of *I. albilinea*. Curiously enough, no representative of this group has ever been found in either Colombia or Ecuador.

*I. a. stolzmanni* has never been met with again since its discovery by the naturalist after whom it is named, who secured four specimens in September, 1878, at Chepen, on the coast of Peru, one of which I have been permitted to examine through the good offices of Dr. Mertens, of the Senckenberg Museum, at Frankfurt.

*Tachycineta albilinea* (not *Petrochelidon albilinea* Lawrence) Sharpe, Cat. Bds. Brit. Mus., 10, p. 115, 1885—part, spec. d, Chepen, Peru; idem and Wyatt, Monog. Hirund., 1, p. 149, 1887—part, Chepen, Peru.

*Iridoprocne albilinea* Chapman, Bull. Amer. Mus. N. H., 55, p. 554, 1926—"Ecuador" (ex Brabourne and Chubb) and Chepen (ex Taczanowski).

*Range*.—Coast region of western Peru (Chepen, Dept. Libertad).

**\**Iridoprocne albiventer* (Boddaert).<sup>1</sup> WHITE-WINGED SWALLOW.**

*Hirundo albiventer* Boddaert, Tabl. Pl. Enl., p. 32, 1783—based on "Hirondelle à ventre blanc de Cayenne" Daubenton, Pl. Enl., pl. 546, fig. 2, Cayenne; Léotaud, Ois. Trinidad, p. 91, 1866—Trinidad.

*Hirundo leucoptera* Gmelin, Syst. Nat., 1, (2), p. 1022, 1789—part, based on Daubenton, Pl. Enl., pl. 546, fig. 2, Cayenne (excl. var.  $\beta$ ); Wied, Beitr. Naturg. Bras., 3, (1), p. 362, 1830—rivers Parahyba, Mucuri, Belmonte, and Ilhéos, Brazil; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 69, 1837—Moxos, Bolivia (spec. in Paris Museum examined); Tschudi, Arch. Naturg., 10, (1), p. 269, 1844—Peru; idem, Unters. Faun. Peru., Ornith., p. 132, 1846—forests of eastern Peru; Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 672, "1848" [=1849]—British Guiana.

*Cotyle leucoptera* Burmeister, Syst. Uebers. Th. Bras., 3, p. 143, 1856—Brazil; (?) idem, Journ. Orn., 8, p. 253, 1860—Mercedes, Rio Negro, Uruguay; (?) idem, Reise La Plata St., 2, p. 478, 1861—same locality.

*Hirundo aequatorialis*<sup>2</sup> Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 400, 1867—"Quito"—Rio Napo, Ecuador (type in coll. of G. N. Lawrence, now in the American Museum of Natural History, New York); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, pp. 977, 979—Pebas (crit.).

*Petrochelidon albiventris* Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 178—lower Ucayali, Peru (eggs descr.); Pelzeln, Orn. Bras., 1, p. 17, 1868—São Paulo (Pirahy, Ypanema); idem, Ibis, 1873, p. 108—Cayenne; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 440—Parahyba River, Brazil.

*Hirundo albiventris* Baird, Rev. Amer. Bds., 1, p. 302, 1865—Bahia (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 569—Pará; Wyatt, Ibis, 1871, p. 323—Magdalena River and Lake Paturia, Colombia; Layard, Ibis, 1873, p. 378—Pará; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 258—lower and upper Ucayali, Santa Cruz, and Pebas, Peru (crit.); idem, l.c., 1879, p. 595—Moxos, Bolivia (ex d'Orbigny); Taczanowski, l.c., 1882, p. 8—Yurimaguas, Peru; idem, Orn. Pér., 1, p. 239, 1884—Peruvian localities (descr.).

*Tachycineta albiventris(er)* Salvin, Ibis, 1885, p. 215—Bartica Grove and Camacusa, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 113, 630, 1885—Oyapock, British Guiana (Bartica Grove, Camacusa, Demerara), Pará, Pernambuco, Pebas, and Copataza River (Ecuador); Allen,

<sup>1</sup> "L'Hirondelle tachetée de Cayenne" of Daubenton (Pl. Enl., pl. 546, fig. 1), the basis of *Hirundo maculata* Boddaert (Tabl. Pl. Enl., p. 32, 1783) and *Hirundo maculosa* Kuhl (Buff. et Daub., Fig. Av. Nom. Syst., p. 10, 1820), appears to be unidentifiable.

<sup>2</sup> Misprinted "*aequatorialis*."



Bull. Amer. Mus. N. H., 2, p. 79, 1889—Reyes, Bolivia; Riker and Chapman, Auk, 7, p. 266, 1890—Santarém; Sharpe and Wyatt, Monog. Hirund., 1, p. 139, pl. 20, 1890 (monog.); Chapman, Bull. Amer. Mus. N. H., 6, p. 28, 1894—Cipero River, Trinidad; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 333—La Merced, Peru; Goeldi, Ibis, 1897, pp. 150, 153, 154, 159, 162—Counany and Amapá, northern Brazil; Ihering, Rev. Mus. Paul., 3, p. 138, 1899—Iporanga, São Paulo; idem, l.c., 4, p. 152, 1900—Cantagallo; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 3, 1900—Carandasinho, Matto Grosso; Berlepsch and Hartert, Nov. Zool., 9, p. 14, 1902—Altagracia and Caicara (Orinoco), Mato River, and Suapure, Caura, Venezuela; Goeldi, Ibis, 1903, p. 499—Rio Capim, Brazil; Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 116, 1904—Sinnamarie, French Guiana; Hellmayr, Nov. Zool., 13, p. 12, 1906—Seelet, Trinidad; idem, l.c., 14, p. 6, 1907—Itaituba and Urucurituba, Rio Tapajóz; idem, l.c., 15, p. 25, 1908—Rio Araguaya, Goyaz; Ihering, Cat. Faun. Braz., 1, p. 339, 1907—São Paulo (Rio Ribeira, Rio Mogy-Guassú); Snethlage, Journ. Orn., 56, pp. 9, 521, 1908—Rio Purús (Cachoeira, Monte Verde) and Rio Tocantins (Alcobaca); Berlepsch, Nov. Zool., 15, pp. 110, 316, 1908—Cayenne, Oyapock, and Sinnamarie, French Guiana; Lowe, Ibis, 1909, p. 323—Cariaco, Venezuela; Beebe, Zoologica (N.Y.), 1, p. 99, 1909—Guanoco, Venezuela; Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 76, 1910—Bahia (Joazeiro) and Piahy (Parnaguá, Amaração); Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 6, 87, 1912—Ipitinga, Rio Acará, and Pará localities; Snethlage, Bol. Mus. Goeldi, 8, p. 469, 1914—Rio Guamá, Rio Capim, Rio Mojú, Rio Tocantins (Alcobaca), Rio Maecurú, Rio Jamauchim, Rio Purús (Cachoeira, Monte Verde), Marajó (Rio Arary, São Natal, Pindobal, Livramento), Rio Macujubim, Amapá, and Rio Jamundá (Faro); Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 9, 1920—Yahuarmayo, Peru; Chubb, Bds. Brit. Guiana, 2, p. 325, 1921—British Guiana (numerous localities); Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 651, 1924—(?) Buenos Aires.

*Iridoprocne albiventris(er)* Bertoni, Seg. Contrib. Orn. Parag., in Rev. Inst. Parag., 1907, p. 2—Alto Paraná, Paraguay; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 351, 1910—(?) Ocampo, Chaco, and (?) Barracas al Sud, Buenos Aires; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 206, 1913—Guinipa River and Pedernales, Venezuela; Dabbene, Bol. Soc. Physics, 1, p. 350, 1914—Misiones (Santa Ana), (?) Chaco Austral (Ocampo), and (?) Buenos Aires (Barracas al Sud); Bertoni, Faun. Parag., p. 61, 1914—Rio Paraná, Iguassú, etc.; Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 162, 1916—Orinoco River (nesting habits, eggs); Chapman, Bull. Amer. Mus. N. H., 36, p. 501, 1917—La Playa, Magdalena River, and La Morelia, Caquetá, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 435, 1922—Fundación, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 554, 1926—"Quito"—Rio Napo, Ecuador; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 181, 1926—Therezina and Salto de Uba, Paraná; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 171, 1928—Ourém, Pará; Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1931—Sevillano, Cienaga Grande, and Fundación, Colombia.

*Iridoprocne albiventer albiventer* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 266, 1929—Tury-assú, Maranhão.

*Hirundo leucorrhoa* (not of Vieillot) Forbes, Ibis, 1881, p. 329—Recife and Parahyba, Brazil.

**Range.**—Eastern South America, from Trinidad (rare), the Guianas, Venezuela, and Colombia (west of the Andes only in the Magdalena Valley), through eastern Ecuador and Peru and the greater part of Brazil south to Bolivia, Paraguay, northeastern Argentina (Misiones),<sup>1</sup> and the states of Matto Grosso and Paraná.<sup>2</sup>

15: Venezuela (Encontrados, Zulia, 1); Colombia (La Playa, near Barranquilla, 1); Peru (Lagunas, lower Huallaga, 5; Yurimaguas, 1); Brazil (Bôa Vista, Rio Branco, 1; Serra da Lua, near Bôa Vista, Rio Branco, 2; Tury-assú, Maranhão, 1; Fazenda Cayoá, Salto Grande do Rio Paranapanema, São Paulo, 1; Descalvados, Matto Grosso, 1); Argentina (Puerto Segundo, Misiones, 1).

**\**Iridoprocne leucorrhoa* (Vieillot). WHITE-RUMPED SWALLOW.**

*Hirundo leucorrhoa* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 519, 1817—based on "*Golondrina rabadilla blanca*" Azara, No. 304,<sup>3</sup> Paraguay

<sup>1</sup> It is extremely doubtful if this swallow really occurs in any other part of Argentina. Dabbene cites the Argentine Chaco (Ocampo, Mocoví) and Barracas al Sud, Buenos Aires, on the authority of the late S. Venturi, but it should be noted that the species is not represented in this naturalist's collections acquired by the Tring Museum. It is somewhat significant that no other person ever met with it in the vicinity of the Argentine capital, though it is admitted to the fauna of Buenos Aires by Marelli, whose entry is, however, rather vague. I am likewise inclined to question Burmeister's record from Uruguay (Mercedes, Rio Negro), where *I. albiventer* has not been found again. It appears to be absent also from the extreme south of Brazil, viz., the states of Santa Catharina and Rio Grande do Sul.

<sup>2</sup> I am unable to recognize an upper Amazonian form (*aequatorialis* Lawrence). Birds from Pebas and other Peruvian localities, which may be assumed to represent that race, have just as much white on the wings as a series from eastern Brazil and Guiana, and do not differ in any other respect, so far as I can see. The amount of white on the tertials becoming greatly reduced with the progress of wear, particular care should be taken in using only specimens in comparable plumage. A single example from the Magdalena River (La Playa) has by no means less white than certain Peruvian birds in similarly abraded condition, though it is, of course, quite possible that adequate material may show that the inhabitants of that region verge in the direction of *I. albilinea*.

**Additional material examined.**—Trinidad: Seelet, 1.—British Guiana: Camacusa, 5.—French Guiana: Cayenne, 1.—Brazil: Ceará, 1; Piahy, Amaração, 1; Parnaguá, 1; Joazeiro, Bahia, 2; Bahia, 1; Nova Friburgo, Rio de Janeiro, 2; São Paulo, Ypanema, 6; Pirahy, 1.—Peru: Pebas, 1.

<sup>3</sup> Though Azara's description is not absolutely accurate in every particular, since the color terms used for the upper parts would seem to be better applicable to *I. leucopygia*, the presence of the white supraloral streak attributed to his "*Golondrina rabadilla blanca*" enables us to identify the bird with tolerable certainty.

and La Plata River; Burmeister, Syst. Uebers. Th. Bras., 3, p. 144, 1856 (crit.); Baird, Rev. Amer. Bds., 1, p. 301, 1865—Buenos Aires (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 139—Conchitas, Buenos Aires (spec. examined); idem, l.c., 1869, p. 597—Cosnipata, Peru (spec. examined); idem, l.c., 1873, p. 185—Cosnipata; Durnford, Ibis, 1876, p. 158—Flores and Belgrano, Buenos Aires (breeding); idem, Ibis, 1877, p. 169—province of Buenos Aires; White, Proc. Zool. Soc. Lond., 1882, p. 596—Santo Tomé, Corrientes; Taczanowski, Orn. Pér., 1, p. 241, 1884—Cosnipata, Peru; Holmberg, Act. Acad. Nac. Cienc. Cordoba, 5, p. 81, 1884—Tandil and La Tinta, Buenos Aires; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 116, 1885—Taquara, Rio Grande do Sul.

*Hirundo frontalis* (not of Quoy and Gaimard, 1830) Gould, Proc. Zool. Soc. Lond., 5, p. 22, Nov., 1837—Montevideo, Uruguay (type lost, formerly in collection of Zoological Society of London); idem, in Darwin, Zool. Beagle, 3, p. 40, 1839—Montevideo.

*Hirundo gouldii* Cassin, Proc. Acad. Nat. Sci. Phila., 5, No. 4, p. 69, 1850—new name for *Hirundo frontalis* Gould, preoccupied.

*Cotyle leucorrhoea* [sic] Burmeister, Journ. Orn., 8, p. 253, 1860—Paraná, Santa Fé; idem, Reise La Plata St., 2, p. 478, 1861—near Paraná; Sternberg, Journ. Orn., 17, p. 270, 1869—Buenos Aires (nesting habits); Doering, Period. Zool. Argent., 1, p. 254, 1874—Rio Guayquiraro, Corrientes; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 400, 1890—Cordoba.

*Petrochelidon leucorrhoea* Pelzeln, Orn. Bras., 1, p. 17, 1868—São Paulo (Taubaté, Ypanema) and Matto Grosso (Villa Bella), Brazil (spec. examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 441—Minas Geraes (Lagôa Santa) and São Paulo (Franca).

*Hirundo (Tachycineta) leucorrhoea* Barrows, Bull. Nutt. Orn. Cl., 8, p. 89, 1883—Concepción del Uruguay (breeding) and Buenos Aires.

*Tachycineta leucorrhoea(us)* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 114, 631, 1885—Uruguay, Argentina (La Plata, Conchitas), Brazil (Pelotas, Rio Grande do Sul), and Peru (Cosnipata); idem and Wyatt, Monog. Hirund., 1, p. 143, pl. 21, 1887 (monog., excl. Chuput Valley); Sclater and Hudson, Arg. Orn., 1, p. 30, 1888—Argentina (excl. Chuput Valley); Frenzel, Journ. Orn., 39, p. 118, 1891—Cordoba; Kerr, Ibis, 1892, p. 124—Fortín Page, lower Pilcomayo (spec. examined); Holland, Ibis, 1892, p. 195—Estancia Espartillar, Buenos Aires; Aplin, Ibis, 1894, p. 166—Santa Elena, Rio Monzón, Uruguay (spec. examined); Koslowsky, Rev. Mus. La Plata, 6, p. 289, 1895—Catamarca; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Mundo Novo, Pedras Brancas, and São Lourenço, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 138, 1899—São Paulo (Ypiranga, Iguapé); Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902—Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tucumán; Bruch, Rev. Mus. La Plata, 11, p. 256, 1904—Rosario, Salta (spec. examined); Ihering, Cat. Faun. Braz., 1, p. 339, 1907—São Paulo (Ypiranga, Iguapé, Cachoeira, Jundiáhy) and Minas Geraes (Mariana); Hartert and Venturi, Nov. Zool., 16, p. 168, 1909—Buenos Aires

(Barracas al Sud, Estancia San Martino Monte) and Entre Rios (La Soledad); Chubb, Ibis, 1910, p. 607—Sapucay, Paraguay (spec. examined); Grant, Ibis, 1911, p. 91—Los Yngleses, Ajó, Buenos Aires (breeding; spec. examined); Gibson, Ibis, 1918, p. 381—Cape San Antonio, Buenos Aires (habits); Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 650, 1924—Prov. Buenos Aires; Tremoleras, El Hornero, 2, p. 22, 1920—Montevideo, Colonia, San José, and Flores, Uruguay; Daguerre, l.c., 2, p. 269, 1922—Rosas, Prov. Buenos Aires (breeding); Serié and Smyth, l.c., 3, p. 51, 1923—Santa Elena, Entre Rios (breeding); Pereyra, l.c., 3, p. 171, 1923—Zelaya, Prov. Buenos Aires; Wilson, l.c., 3, p. 359, 1926—Dept. General López, Santa Fé.

*Iridoprocne leucorhoa* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 350, 1910 (range in Argentina, excl. Patagonia); Hussey, Auk, 33, p. 394, 1916—La Plata (breeding); Bertoni, Faun. Parag., p. 61, 1914—Paraguay; Wetmore, Bull. U. S. Nat. Mus., 133, p. 341, 1926—Paraguay (west of Puerto Pinasco) and Uruguay (San Vicente and Bañado de la India Muerta, near Lazcano); Naumburg, Bull. Amer. Mus. N. H., 60, p. 315, 1930—Villa Bella de Matto Grosso; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 304, 1930—San José, Formosa.

*Hirundo leucopyga* Meyen, Nov. Act. Acad. Leop.-Carol., 16, Suppl., p. 73, 1834—part, spec. from Montevideo.

*Hirundo meyeri* (not *Petrochelidon meyeri* Cabanis) Dalgleish, Proc. Roy. Phys. Soc. Edinb., 6, p. 142, 1881—Tala, Uruguay (breeding; eggs descr.).

**Range.**—Southern Brazil, north to Minas Geraes, São Paulo, and Matto Grosso (Villa Bella); eastern Bolivia (Buenavista, Dept. Santa Cruz); southeastern Peru (Cosnipata, Dept. Cuzco); northern Argentina, south to Buenos Aires Province, west to Cordoba, Catamarca, and Tucumán; Paraguay; Uruguay.<sup>1</sup>

6: Bolivia (Buenavista, Dept. Santa Cruz, 1); Argentina (Concepción, Tucumán, 5).

<sup>1</sup> This is the Tree Swallow breeding in Uruguay, southern Brazil, and northern Argentina (Entre Rios, Santa Fé, Buenos Aires). Evidently it also nests in the northwestern section of the latter country, for our series from Concepción, Tucumán, besides adult birds (Sept., Oct.), contains a female in the brown-backed juvenile plumage taken by J. Mogensen on January 22, 1918. A single adult female, secured by H. Whitely on October 1, 1868, at Cosnipata, Peru, probably a migrant from the south, is in every respect similar to Paraguayan examples. Its range in the south does not seem to extend beyond Buenos Aires Province. The Chubut record of this swallow by Durnford, perpetuated in literature by various authors, pertains to *I. leucopyga*, as shown by one of his specimens in the British Museum.

**Additional material examined.**—Brazil: Villa Bella de Matto Grosso, Matto Grosso, 3; Taubaté, São Paulo, 1; Ypanema, São Paulo, 2; Pelotas, Rio Grande do Sul, 1.—Uruguay: Santa Elena, Monzón, Soriano, 1 (O. V. Aplin); unspecified, 1 (Alan Peel).—Paraguay: Sapucay, 1; Mision Inglesa, Chaco, 1; lower Pilcomayo, 1; Villa Rica, 1.—Argentina: Santa Elena, Entre Rios, 2 (Oct. 4, 1895; Dec. 18, 1898. A. H. Holland); Conchitas, Buenos Aires, 2 (Sept., 1866. W. Hudson); Los Yngleses, Ajó, Buenos Aires, 3 (Sept.-Dec. C. B. Grant); Rosario, Salta, 1 (Sept. 14, 1896. F. Gerling); San José, Formosa, 2 (Oct. 19).—Peru: Cosnipata, 1 (Oct. 1, 1868. H. Whitely).

**\*Iridoprocne leucopygia (Meyen).<sup>1</sup> CHILEAN SWALLOW.**

*Hirundo leucopygia* Meyen, Nov. Act. Acad. Leop.-Carol., 16, Suppl., p. 73, pl. 10, fig. 2, 1834—Santiago, Chile (type in Berlin Museum); Burmeister, Syst. Uebers. Th. Bras., 3, p. 144, 1856—Chile (crit.); Philippi, Anal. Univ. Chile, 31, p. 249, 1868—Chile; Landbeck, Zool. Garten, 18, p. 235, 1877—Chile; Gigoux, Rev. Chil. Hist. Nat., 28, p. 87, 1924—Caldera, Atacama.

*Petrochelidon meyeri* Cabanis, Mus. Hein., 1, p. 48, 1851—new name for *Hirundo leucopygia* (Meyen).<sup>2</sup>

*Hirundo leucorrhoa* (not of Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 69, 1837—Valparaíso (spec. in Paris Museum examined); Durnford, Ibis, 1877, p. 32; idem, Ibis, 1878, p. 392—Chubut Valley (spec. examined).

*Iridoprocne leucorrhoa* Stone, Rep. Princet. Univ. Exp. Patag., Zool., 2, p. 813, 1928—Chubut (ex Durnford).

*Tachycineta leucorrhou*s Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 359, 1902—Chubut Valley (ex Durnford).

*Hirundo leucopygia* Gould, in Darwin, Zool. Beagle, 3, p. 40, 1839—Port Famine, Tierra del Fuego, and Valparaíso, Chile; Fraser, Proc. Zool. Soc.

<sup>1</sup> *Iridoprocne leucopygia* (Meyen) differs from *I. leucorrhoa* by decidedly blue gloss of the upper parts, more blackish wings and tail, absence or mere suggestion of the white frontal band and supraloral streak, deeper (velvety) black loreal spot, and generally darker grayish brown under wing coverts. The bill is, as a rule, smaller, but I am unable to appreciate any divergency in the amount of adhesion of the toes. It is hardly more than subspecifically distinct, being probably the western and southern representative of *I. leucorrhoa*. Though much remains yet to be learned about its distribution, it is evident from published records that this tree swallow nests in Tierra del Fuego and along the Straits of Magellan. The northern limit of its breeding area has yet to be determined, but it seems to extend at least to the Rio Negro. As shown by an adult bird in the British Museum, it is the present species, and not *I. leucorrhoa*, as erroneously recorded by Durnford, that lives in the valley of the Chubut. If Holland (Ibis, 1892, p. 196) claims its breeding at the Estancia Espartillar, Prov. Buenos Aires, his observations doubtless refer to the other species, *I. leucorrhoa*, well known to do so in that region. Of the two specimens collected by him, which we have examined in the British Museum, one, an adult in full molt, was taken in winter (May 15, 1888), while the other, an adult male in newly molted condition, shot on October 6, 1889, may well have been a migratory individual. C. B. Grant expressly states that the Chilean Swallow is merely a winter visitor in the Ajó district of Buenos Aires. His specimen, now in the British Museum, was collected on May 9, hence in winter.

*Additional material examined.*—Chile: Coquimbo, 1; San Alfonso, Quillota, Valparaíso, 1; Peñaflor, Santiago, 1; Santiago, 1; Rancagua, O'Higgins, 1; Caillihue, Curicó, 1; Concepción, 1; Maquegua, Arauco, 1; Corral, Valdivia, 3; Valdivia, 1. —Argentina: Tierra del Fuego, Via Monte, 1; Punta Arenas, Straits of Magellan, 4; Laguna Colguape, Chubut, 1 (Nov., 1877. H. Durnford); Valle del Lago Blanco, Chubut, 3 (Oct. 18, Nov. 26, 28, 1901. J. Koslowsky); Los Yngleses, Ajó, Buenos Aires, 1 (May 9, 1909. C. B. Grant); Estancia Espartillar, Buenos Aires, 2 (May 15, 1888, and Oct. 6, 1889. A. H. Holland); Barracas al Sud, 1 (July 20, 1904).

<sup>2</sup> The renaming of the species described by Meyen was quite unnecessary, as we have pointed out in another place (Field Mus. Nat. Hist., Zool. Ser., 19, p. 48, 1932).

- Lond., 11, p. 110, 1843—Chile; Housse, Rev. Chil. Hist. Nat., 29, p. 143, 1925—San Bernardo, Chile.
- Cypselus* (!) *leucopygius* Des Murs, in Gay, Hist. Ffs. Pol. Chile, Zool., 1, p. 266, 1847—Chile; Germain, Proc. Bost. Soc. N. H., 7, p. 309, 1860—Santiago (nesting habits).
- Hirundo meyeri* Pelzeln, Reise Novara, Zool., 1, Vögel, p. 41, 1865—Chile; Selater, Proc. Zool. Soc. Lond., 1867, pp. 321, 337—Valparaíso, Chile; Selater and Salvin, Ibis, 1870, p. 499—Sandy Point, Straits of Magellan; Reed, Anal. Univ. Chile, 49, p. 543, 1877—Cauquenes, Colchagua; Selater and Salvin, Proc. Zool. Soc. Lond., 1878, p. 432—Sandy Point (spec. examined).
- Tachycineta meyeri* Salvin, Proc. Zool. Soc. Lond., 1883, p. 420—Coquimbo, Chile; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 116, 631, 1885—Chile (Coquimbo, Colchagua), Patagonia (Sandy Point), and "Bolivia" (errore); idem and Wyatt, Monog. Hirund., 1, p. 153, pl. 23, 1889 (monog.); Ridgway, Proc. U. S. Nat. Mus., 12, p. 131, 1889—Laredo Bay, Straits of Magellan; Allen, Bull. Amer. Mus. N. H., 2, p. 79, 1889—"Falls of the Rio Madeira, Bolivia," errore, probably Valparaíso; Holland, Ibis, 1891, p. 16; idem, Ibis, 1892, p. 196—Estancia Espartillar, Buenos Aires (spec. examined); Reed, Anal. Univ. Chile, 93, p. 199, 1896—Chile; Lane, Ibis, 1897, p. 15—Corral, Valdivia, and Maquegua, Arauco, Chile (spec. examined); Albert, Anal. Univ. Chile, 100, p. 866, 1898—Chile (monog.); Salvadori, Ann. Mus. Civ. Stor. Nat. Genova, 40, p. 616, 1900—Penguin Rookery, Staten Island; Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 360, 1902—Puerto Hope, Clarence Island, Tierra del Fuego; Nicoll, Ibis, 1904, p. 42—Punta Arenas (spec. examined); Crawshaw, Bds. Tierra del Fuego, p. 48, 1907—Rio McClelland Settlement; Grant, Ibis, 1911, p. 91—Los Yngleses, Ajó, Buenos Aires (spec. examined); Paessler, Journ. Orn., 70, p. 470, 1922—Coronel, Chile (habits, nest, and eggs); Peters, Bull. Mus. Comp. Zool., 65, p. 326, 1923—Rio Colorado, Huanuluan, Paso Flores (Rio Limay), and Lake Nahuel Huapi, Patagonia; Jaffuel and Pirion, Rev. Chil. Hist. Nat., 31, p. 105, 1927—Marga-Marga, Valparaíso (=juv.); Bullock, l.c., 33, pp. 124, 182, 1929—Cerro Nahuelbuta and Angol, Malleco.
- Hirundo* (*Tachycineta*) *meyeri* Oustalet, Miss. Sci. Cap Horn, Zool., 6, p. B. 49, 1891—Punta Arenas, Orange Bay, and Santa Cruz, Patagonia.
- "*Hirundo leucopyga* Licht. (*H. meyeri* Cab.)" Philippi, Anal. Mus. Nac. Chile, 15, p. 23, pl. 20, fig. 2, 1902—Chile (crit.).
- Iridoprocne meyeri* Bertoni, Seg. Con. Orn. Parag., in Rev. Inst. Parag., 1907, p. 2—Asunción, Paraguay; idem, Faun. Parag., p. 61, 1914—Asunción; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 350, 1910 (range in Argentina); Barros, Rev. Chil. Hist. Nat., 24, p. 147, 1920—Nilahue, Curicó; idem, l.c., 25, p. 186, 1921—Cordillera of Aconcagua; Wetmore, Bull. U. S. Nat. Mus., 133, p. 341, 1926—Guaminí, Buenos Aires, and Concon, Chile; idem, Univ. Calif. Pub. Zool., 24, p. 453, 1926—Rio Fetaleufu and Rio Pico, Chubut (crit.); Friedmann, Bull. Mus. Comp. Zool., 68, p. 210, 1927—Concepción, Tucumán; Pereyra, El

Hornero, 4, p. 32, 1927—San Rafael, Mendoza; Stone, Rep. Princet. Univ. Exped. Patag., Zool., 2, p. 815, 1928—Punta Arenas (breeding).

*Hirundo leucoptera* (not of Gmelin) Housse, Rev. Chil. Hist. Nat., 28, p. 48, 1924—Isla Mocha, Chile.

*Hirundo cyanoleuca* (not of Vieillot) Frauenfeld, Verh. Zool. Bot. Ges., 10, Abhandl., p. 637, 1860—near Santiago, Chile (spec. examined); Lataste, Act. Soc. Scient. Chili, 3, p. CXV, 1894—Ninhue, Maule, Chile; idem, l.c., 5, p. XXXIII, 1895—Caillihue, Curicó, Chile (spec. examined); Waugh and Lataste, l.c., 4, p. LXXXIV, 1894—Peñaflor, Santiago, Chile (spec. examined); idem, l.c., 4, p. CLXX, 1895—San Alfonso, Quillota, Chile (spec. examined).

*Range*.—Breeds in Tierra del Fuego, Patagonia, up to the Rio Negro, and Chile north to Atacama; migrates in winter northwards to Buenos Aires (Guaminí, Est. Espartillar, Rosas), Mendoza, and Tucumán, and even as far as Paraguay (one record from Asunción).

8: Chile (Ramadilla, Copiapó Valley, Atacama, 1; Mafil, Valdivia, 1; Rio Inio, Chiloé Island, 1; Quellon, Chiloé Island, 2); Argentina (Concepción, Tucumán, 3).

### Genus TACHYCINETA Cabanis

*Tachycineta* Cabanis, Mus. Hein., 1, p. 48, 1851—type, by orig. desig., *Hirundo thalassina* Swainson.

#### \**Tachycineta thalassina thalassina* (Swainson). MEXICAN VIOLET-GREEN SWALLOW.

*Hirundo thalassinus* Swainson, Phil. Mag., (n.s.), 1, No. 5, p. 366, 1827—tableland and Real del Monte, Hidalgo, Mexico (type probably in University Museum, Cambridge, England).

*Tachycineta thalassinus*(a) Sumichrast, Mem. Bost. Soc. N. H., 1, p. 547, 1869—Vera Cruz region; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 233, 1883—part, Mexican localities and references; Sharpe, Cat. Bds. Brit. Mus., 10, p. 119, 1885—part, Puebla, Mexico; Sharpe and Wyatt, Monog. Hirund., 1, p. 175, 1892—part, Mexico (Sierra de Bolaños, Jalisco; valley of Mexico, Puebla, Vera Cruz, Oaxaca).

*Tachycineta thalassina thalassina* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 93, 1904—Mexican plateau, north to Chihuahua, south to Vera Cruz, Mexico, and Oaxaca (monog., full bibliog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 266, 1931—Tecoripa and Tésia, Sonora, and Pacheco, Chihuahua (crit.).

*Tachycineta thalassina lepida* (not of Mearns) Miller, Bull. Amer. Mus. N. H., 22, p. 176, 1906—Rio Sestin and Arroyo del Buey, northwestern Durango (crit.).

*Range*.—Mexican plateau, from Sonora, Chihuahua, and Durango south to the states of Vera Cruz, Puebla, Mexico, and Oaxaca.<sup>1</sup>  
9: Mexico (Babicora, Chihuahua, 8; Tuxpan, Jalisco, 1).

**\*Tachycineta thalassina lepida Mearns. VIOLET-GREEN SWALLOW.**

*Tachycineta lepida* Mearns, Proc. Biol. Soc. Wash., 15, p. 31, 1902—Campbell's ranch in the Laguna Mountains (Coast Range), twenty miles north of Campo, San Diego County, California (type in U. S. National Museum).

*Tachycineta thalassina lepida* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 95, 1904 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 787, 1910—Costa Rica (Matina River and Bebedéro); Grinnell, Univ. Calif. Pub. Zool., 32, p. 190, 1928—northern Lower California (breeding); van Rossem, Trans. San Diego Soc. N. H., 6, p. 267, 1931—El Doctór, Tecoripa, Tésia, and Guirocoba, Sonora (migrant); Griscom, Bull. Amer. Mus. N. H., 64, p. 282, 1932—Zanjon, San Mateo, Chanquejelve, and Chichicastenango, Guatemala (winter visitor).

*Tachycineta thalassinus* (not *Hirundo thalassina* Swainson) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 233, 1883—part, western North America and Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, p. 119, 1885—part, western North America; idem and Wyatt, Monog. Hirund., 1, p. 175, pl. 25, 1892—part, western North America, in winter to Guatemala.

*Range*.—Breeds from central Alaska, Yukon, and central Alberta south to northern Lower California and the Mexican boundary, west to western South Dakota and western Nebraska; winters in Mexico south to Guatemala and Costa Rica, migrating through western Texas; accidental in Illinois.

22: British Columbia (Okanagan Landing, 4); California (Menlo Park, 1; Mount Diablo, 1; San Geronimo, 1; Monterey, 2; Nicasio, 3); Arizona (Huachuca Plains, 1; Huachuca Mountains, 2); Colorado (Hot Sulphur Springs, 6; Colorado Springs, 1).

**Tachycineta thalassina brachyptera Brewster. SAN LUCAS SWALLOW.**

*Tachycineta thalassina brachyptera* Brewster, Bull. Mus. Comp. Zool., 41, p. 167, Sept., 1902—Sierra de Laguna, Lower California (type in collection of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 290, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 98, 1904—Cape district of Lower

<sup>1</sup> Birds from northwestern Mexico (Sonora, Chihuahua, Durango) are more or less intermediate between *thalassina* and *lepida*, and their reference to one rather than the other is largely a matter of personal opinion. Ridgway and van Rossem call them *thalassina*, while Miller, mainly on account of their smaller size, assigns specimens from Durango to *lepida*. A good series of properly sexed breeding birds from the disputed region is required to determine which one is the better course.



California (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 190, 1928—southern Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 267, 1931—Guaymas (breeding) and Tésia, Sonora (crit.).

*Range*.—Southern half of Lower California, north to El Rosario and Sierra Juárez, and opposite coast of Sonora (about Guaymas).

### Genus *CALLICHELIDON* Baird

*Callichelidon* (Bryant MS.) Baird, Rev. Amer. Bds., 1, p. 303, May, 1865—type, by orig. desig., *Hirundo cyaneoviridis* Bryant.

#### \**Callichelidon cyaneoviridis* (Bryant). BAHAMA SWALLOW.

*Hirundo cyaneoviridis* Bryant, Proc. Bost. Soc. N. H., 7, p. 111, 1859—Nassau, New Providence, Bahamas (cotypes from the collection of H. W. Bryant now in U. S. National Museum, the Academy of Natural Sciences, Philadelphia, and Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs and Penard, Bull. Mus. Comp. Zool., 67, p. 204, 1925); Baird, Rev. Amer. Bds., 1, p. 303, 1865—Nassau (monog.); Cory, Bds. Bahama Is., p. 79, 1890—Andros and New Providence (Nassau).

*Callichelidon cyaneoviridis* Cory, Auk, 3, p. 59, 1886—Bahamas (descr.); idem, Bds. W. Ind., p. 73, 1889—Bahamas; idem, Auk, 8, pp. 294, 297, 350, 352, 1891—New Providence, Berry Islands, Great Bahama, Abaco, Anguilla, and Cay Sal, Bahamas; Ridgway, Auk, 8, p. 334, 1891—Abaco; Brewster, Auk, 14, p. 221, 1897—Tarpon Springs, Florida (Sept. 3, 1890); Bonhote, Ibis, 1899, p. 511—Nassau, New Providence; Bangs, Auk, 17, p. 288, 1900—New Providence (Nassau) and Current Island, Eleuthera; Bonhote, Ibis, 1903, p. 287—Nassau, New Providence; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 99, 1904—Bahamas (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, pp. 354, 365, 1905—Great Bahama, Abaco, Berry Islands, New Providence, Andros, Cay Sal, Current Island, and Anguilla (crit.); Todd and Worthington, Ann. Carnegie Mus., 7, pp. 431, 459, 1911—New Providence, Great Inagua, Andros, and Abaco (habits); Bangs, Auk, 31, p. 401, 1914—Nipe Bay, Cuba; Barbour, Mem. Nutt. Orn. Cl., 6, p. 112, 1923—Cuba.

*Callichelidon cyaneoviridis* Scott, Auk, 7, pp. 265, 312, 1890—Garden Key, Dry Tortugas (male adult, Apr. 7, 1890); Northrop, Auk, 8, p. 70, 1891—New Providence and Andros.

*Tachycineta cyaneoviridis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 121, 1885—Bahamas; Sharpe and Wyatt, Monog. Hirund., 1, pp. 185, 193, pl. 26, Dec., 1889—Bahamas and Dry Tortugas (monog.).

*Range*.—Bahamas (Great Bahama, Abaco, Berry Islands, New Providence, Andros, Cay Sal, Current Island, Anguilla, Great Inagua) and Cuba (Nipe Bay); accidental in southern Florida (Tarpon Springs, Sept. 3, 1890; Garden Key, Dry Tortugas, Apr. 7, 1890).

18: Bahamas (Nassau, New Providence Island, 11; Abaco Island, 3; Cay Sal Island, 2; Great Bahama, 1; Berry Islands, 1).

### Genus LAMPROCHELIDON Ridgway

*Kalochelidon* (not *Callichelidon* Baird, 1865) Bryant, Proc. Bost. Soc. N. H., 11, p. 95, Dec., 1866—type, by monotypy, *Hirundo euchrysea* var. *dominicensis* Bryant.

*Lamprochelidon* Ridgway, Proc. Biol. Soc. Wash., 16, p. 106, 1903—type, by orig. desig., *Hirundo euchrysea* Gosse.

#### \**Lamprochelidon euchrysea euchrysea* (Gosse). GOSSE'S SWALLOW.

*Hirundo euchrysea* Gosse, Bds. Jamaica, p. 68, 1847—"higher mountains formed by the limestone range of the very centre of the island, as in Manchester and St. Ann's" (type in collection of P. H. Gosse, now in British Museum); idem, Illust. Bds. Jamaica, pl. 12, 1849; March, Proc. Acad. Nat. Sci. Phila., 1863, p. 295—Content, Jamaica; Baird, Rev. Amer. Bds., 1, p. 304, 1865—Trelawny and Spanishtown, Jamaica (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 170, 632, 1885—Jamaica; Sharpe and Wyatt, Monog. Hirund., 2, pp. 407, 426, pl. 76, 1890—Jamaica (monog.).

*Petrochelidon euchrysea* Sclater, Proc. Zool. Soc. Lond., 1861, p. 72—Freeman's Hall, Trelawny, Jamaica.

*Tachycineta euchrysea* Cory, Auk, 3, p. 58, 1886—Jamaica (descr.); idem, Bds. W. Ind., p. 72, 1889—Jamaica (monog.); Scott, Auk, 10, p. 181, 1893—higher altitudes of Jamaica.

*Lamprochelidon euchrysea* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 101, 1904—Jamaica (monog.).

*Range*.—Island of Jamaica, Greater Antilles.

3: Jamaica (St. Georges, Portland, 2; unspecified, 1).

#### \**Lamprochelidon euchrysea sclateri* (Cory).<sup>1</sup> SCLATER'S SWALLOW.

*Hirundo sclateri* Cory, Auk, 1, p. 2, 1884—Santo Domingo (type, from La Vega, in collection of C. B. Cory, now in Field Museum); idem, Bds. Haiti and San Dom., p. 45, col. pl., 1884—La Vega, Santo Domingo; Sharpe, Cat. Bds. Brit. Mus., 10, p. 171, 1885—Santo Domingo (ex Cory); Sharpe and Wyatt, Monog. Hirund., 2, pp. 409, 426, pl. 76, 1890—Santo Domingo (monog.); Christy, Ibis, 1897, p. 322—La Vega; Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Camu River.

*Tachycineta sclateri* Cory, Auk, 3, p. 58, 1886—Santo Domingo (descr.); idem, Bds. W. Ind., p. 72, 1889—Santo Domingo (descr.).

<sup>1</sup> This is a strongly marked race, recognizable by larger size, bluish green instead of mainly golden green dorsal plumage and edges to the wings, as well as more deeply forked tail.

*Lamprochelidon sclateri* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 102, 1904—Haiti (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 507, 1928—La Selle and La Hotte, Haiti; Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 320, 1929—Puente Yuna, near Bonao, Haiti; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 315, 1931—Hispaniola (monog., habits).

*Hirundo euchrysea* var. *dominicensis* (not *Hirundo dominicensis* Gmelin, 1789) Bryant, Proc. Bost. Soc. N. H., 11, p. 95, Dec., 1866—Port au Prince, Haiti (type in U. S. National Museum).

*Range*.—Island of Haiti, Greater Antilles.

23: Santo Domingo (La Vega, 23).

## Family MOTACILLIDAE. Wagtails and Pipits

### Genus MOTACILLA Linnaeus

*Motacilla* Linnaeus, Syst. Nat., 10th ed., 1, p. 184, 1758—type, by tautonymy, "*Motacilla*" = *Motacilla alba* Linnaeus.

*Budytes* Cuvier, Règne Anim., 1, p. 371, "1817" [= Dec. 7, 1816]—type, by subs. desig. (Gray, List Gen. Bds., p. 24, 1840), *Motacilla flava* Linnaeus.

### *Motacilla alba alba* Linnaeus. WHITE WAGTAIL.

*Motacilla alba* Linnaeus, Syst. Nat., 10th ed., 1, p. 185, 1758—Europa = Sweden; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1853, p. 70—Greenland; idem, Ibis, 1861, p. 6—southern Greenland; Turner, Proc. U. S. Nat. Mus., 8, p. 236, 1885—Hunting Bay, near Fort Chimo, Ungava; Helms and Peterson, Vidensk. Medd. Naturhist. Foren., 1898, p. 174—Angmagsalik, Greenland; Winge, Medd. Grønland, 21, p. 278, 1898—Godthaab and Angmagsalik, Greenland; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 4, 1904 (monog., bibliog.).

*Range*.—Breeds in Europe generally, winters in tropical Africa, Madeira, and the Canary Islands; accidental in northern Ungava (Fort Chimo, Aug. 29, 1883) and Greenland (Godthaab and Angmagsalik).<sup>1</sup>

### *Motacilla alba ocularis* Swinhoe. SWINHOE'S WAGTAIL.

*Motacilla ocularis* Swinhoe, Ibis, 2, p. 55, 1860—Amoy, China (type in collection of R. Swinhoe, now in the British Museum); Ridgway, Proc. U. S. Nat. Mus., 4, p. 414, 1882—La Paz, Lower California; idem, l.c., 6, p. 145, 1883—part, La Paz; Belding, l.c., 5, p. 535, 1883—La Paz; (?) Turner, Auk, 2, p. 157, 1885—Attu Island, Aleutians (May 14, 1881); (?) Turner, Contrib. Nat. Hist. Alaska, p. 178, pl. 11, 1886—Attu Island, Aleutians; (?) Bishop, N. Amer. Fauna, 10, p. 91, 1900—Aphoon mouth of the Yukon, Alaska; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 6, 1904 (monog., bibliog.); (?) Bent, Smiths. Misc. Coll., 66, No. 2, p. 32, 1916—

<sup>1</sup> Walker's record (Ibis, 1860, p. 166) from Godhavn (Aug., 1857), according to Winge (Medd. Grønland, 21, p. 279), turned out to refer to the Wheatear (*Oenanthe o. leucorhoa*).

between Kotzebue Sound and Cape Lisburne, Alaska; Grinnell, Univ. Calif. Pub. Zool., 32, p. 206, 1928—La Paz, Lower California.

*Range*.—Breeds in northeastern Siberia, migrating in winter south to southern China and India; accidental in Lower California (La Paz, Jan. 9, 1882). [Sight records from Attu Island, Aleutians (May 14, 1881);<sup>1</sup> Chamisso Island (Aug. 1); and mouth of the Yukon, Alaska (Aug. 28)<sup>1</sup>].

### **Motacilla alba lugens Kittlitz. BLACK-BACKED WAGTAIL.**

*Motacilla lugens* (Pallas MS.) Kittlitz, Kupfert. Naturg. Vög., Heft 2, p. 16, pl. 21, fig. 1, 1833—Kamchatka (type in Frankfurt Museum; cf. Hartert, Kat. Vogels. Mus. Senckenb. Naturf. Ges., p. 44, 1891); Thayer and Bangs, Auk, 38, p. 460, 1921—"Attic" [= Attu] Island, Aleutians (May 4, 1913).

*Range*.—Kamchatka, Kurile and Commander Islands, Askold, and northern Japan; winters in China and Japan; casual on Attu Island, Aleutian chain (May 4, 1913).

### **Motacilla flava alascensis (Ridgway). ALASKA YELLOW WAGTAIL.**

*Budytes flavus alascensis* Ridgway, Proc. Biol. Soc. Wash., 16, p. 105, 1903—St. Michael, Alaska (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 8, 1904—Alaska (monog., full bibliog.); Bent, Smiths. Misc. Coll., 66, No. 2, p. 33, 1916—Yukon Delta to Nome, and Cape Espenberg, Alaska; Sushkin, Proc. Bost. Soc. N. H., 38, p. 32, 1925—western Alaska and extreme northeastern Siberia (crit.).

*Budytes flavus similimus* (not of Hartert) Brooks, Bull. Mus. Comp. Zool., 59, p. 403, 1915—Providence Bay, Chukchi Peninsula (crit.).

*Range*.—Arctic zone of extreme northeastern Siberia (Emma Harbor, Plover Bay, and Providence, Chukchi Peninsula) and western Alaska, from Point Barrow and Kotzebue Sound to Nushagak River; winters probably in the tropical parts of eastern Asia (Philippine Islands?).<sup>2</sup>

### **Genus ANTHUS Bechstein**

*Anthus* Bechstein, Gemein. Naturg. Deutschl., 2nd ed., 2, p. 302 (footnote), 1805—type, by subs. desig. (Sharpe, Cat. Bds. Brit. Mus., 10, p. 534, 1885), *Alauda trivialis* Linnaeus.<sup>3</sup>

*Neocorys* Sclater, Proc. Zool. Soc. Lond., 25, p. 5, 1857—type, by orig. desig., *Anthus spragueii* Audubon.

<sup>1</sup> Possibly *M. alba lugens* Kittlitz. Both records based on field observations only.

<sup>2</sup> *Material examined*.—Alaska: St. Michael, 2; mouth of Yukon, 1.

<sup>3</sup> Cf. Laubmann, Verh. Orn. Ges. Bay., 15, p. 222, 1922.

*Notiucorys* Baird, Rev. Amer. Bds., 1, pp. 151, 156, 1864—type, by monotypy, *Anthus rufus* auct.=*Anthus lutescens parvus* Lawrence.

*Pediocorys* Baird, Rev. Amer. Bds., 1, pp. 151, 157, 1864—type, by orig. desig. (p. 153, in text), *Anthus bogotensis* Sclater.

*Xanthocorys* Sharpe, Cat. Bds. Brit. Mus., 10, p. 619, 1885—type, by monotypy, *Anthus nattereri* Sclater.

### ***Anthus spinoletta japonicus* Temminck and Schlegel. JAPANESE PIPIT.**

*Anthus pratensis japonicus* Temminck and Schlegel, in Siebold, Faun. Japon., Aves, p. 59, pl. 24, 1847—Japan (type in Leiden Museum).

*Anthus spinoletta japonicus* Swarth, Proc. Calif. Acad. Sci., (4), 17, p. 250, 1928—Nunivak Island, Alaska.

*Range*.—Kamchatka, eastern Siberia, and the Kurile Islands; winters in Japan and China; casual on Nunivak Island, Alaska (Sept. 10, 1927).<sup>1</sup>

### **\**Anthus spinoletta rubescens* (Tunstall). AMERICAN PIPIT.**

*Alauda rubescens* Tunstall, Orn. Brit., p. 2, 1771—based on "The Lark from Pensilvania" Edwards, Glean. Nat. Hist., 2, p. 185, pl. 297; Pennsylvania.

*Alauda pensilvanica* Latham, Gen. Syn. Bds., Suppl., 1, p. 287, 1787—based on "Red Lark" Latham (Gen. Syn. Bds., 2, (2), p. 376), which in its turn is based on "The Lark of Pensilvania" Edwards, Glean. Nat. Hist., 2, p. 185, pl. 297; Pennsylvania.

*Alauda ludoviciana* Gmelin, Syst. Nat., 1, (2), p. 793, 1789—based on "La Farlouzanne" Buffon; Louisiana.

*Alauda rubra* Gmelin, Syst. Nat., 1, (2), p. 794, 1789—based on "Red Lark" Latham (Gen. Syn. Bds., 2, (2), p. 376) and Pennant (Arct. Zool., 2, p. 393); Pennsylvania.

*Motacilla hudsonica* Latham, Ind. Orn., Suppl., 2, p. 503, 1801—based on "Hudsonian Wagtail" Latham, Gen. Syn. Bds., Suppl., 2, p. 231; "ad Sinum Hudsonis."

*Alauda rufa* (not of Gmelin, 1789) Wilson, Amer. Orn., 5, p. 89, pl. 42, fig. 4, 1812—Pennsylvania (type in Peale's Museum, probably lost).

*Anthus rubens* Merrem, in Ersch and Gruber, Allgem. Encycl. Wiss. und Kuenste, 4, p. 290, 1820—new name for *Alauda rubra* Gmelin and *Alauda ludoviciana* Gmelin; Louisiana and Pennsylvania.

*Anthus pipiens* Audubon, Orn. Biog., 1, p. 408, 1831—the prairies of our northwestern states; idem, l.c., 5, p. 449, 1839—Texas, Saskatchewan, and coast of Labrador.

<sup>1</sup> This is the only record of the Japanese Pipit from North America. The bird recorded by Hanna (Journ. Wash. Acad. Sci., 9, p. 176, 1919; Auk, 37, p. 25, 1920) from St. Paul Island, Pribiloff group, under the name of *A. s. japonicus* was shown by Riley and Wetmore (Condor, 30, p. 193, 1928) to be a specimen of *A. s. rubescens* with somewhat unusual coloring.

*Anthus reinhardti* Holböll, Naturhist. Tidskr. (Krøyer), 4, p. 393 (in text), 1843—new name for *Anthus ludovicianus* "Lichtenstein"—*Alauda ludoviciana* Gmelin.

*Anthus hypogaeus* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 65, 1854—new name for *Alauda ludoviciana* Gmelin; San Francisco, California.

*Anthus pensilvanicus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 12, 1904 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 180, 1906—Villa Ocampo and Rio Sestin, Durango.

*Anthus spinoletta rubescens* Oberholser, Auk, 36, p. 406, 1919 (crit.).

**Range.**—Arctic zone from northeastern Siberia, northern Alaska, northern Mackenzie, latitude 68° on the west coast of Davis Strait, and latitude 70° on the west coast of Greenland south to Great Slave Lake, northern Manitoba, Quebec (Gaspé), and Newfoundland, and from the Aleutian Islands to Prince William Sound; also in the Rocky Mountains south to Oregon, Colorado, and New Mexico; winters from northern California and the Ohio and lower Delaware river valleys as far south as the Gulf coast, Lower California, and Guatemala; casual in Bermuda, accidental in Heligoland.<sup>1</sup>

56: Baffin Land (Peter Force Sound, Frobisher Bay, 2); Labrador (Battle Harbor, 4; Indian Harbor, 3; Nain, 1); Maine (New Vineyard, 2); Connecticut (East Hartford, 1); Massachusetts (unspecified, 1); New York (Cayuga, 1; Owasco, 2); South Carolina (Frogmore, 2; Aiken County, 2); Florida (Key West, 3); Texas (Port O'Connor, 1; Corpus Christi, 3; Fort Davis, 1; Port Lavaca, 1; Ingram, 1); Colorado (Mount Flora, 2; Fort Lyon, 4; unspecified, 1); Arizona (Tucson, 1); California (Nestor, 1; Pacific Beach, 3; Livermore, 1; San Pablo Valley, Berkeley, 1; Los Gatos, 1; San Pedro, 2; Oakland, 1); Oregon (Pineville, 1); Washington (Clallam Bay, 1); Wisconsin (Beaver Dam, 4); Illinois (Worth, 1).

### **Anthus pratensis (Linnaeus). MEADOW PIPIT.**

*Alauda pratensis* Linnaeus, Syst. Nat., 10th ed., 1, p. 166, 1758—"in Europae pratis"—Sweden.

*Anthus pratensis* Paulsen, in Holböll, Orn. Beitr. Faun. Grönl., pp. 6, 24, 1846—Greenland (one spec.); Winge, Medd. Grønland, 21, p. 275, 1898—west coast of Greenland (one spec.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 18, 1904 (monog., full bibliog.).

<sup>1</sup> According to Mr. W. E. C. Todd (in litt.), the American Pipit is divisible into several races. It is to be hoped that Mr. Todd will soon make known the results of his investigation.

*Range*.—Iceland, the Faroes, the greater part of Europe, western Siberia, and Turkestan; winters in northern Africa; accidental in Greenland (one record from the west coast, fall of 1844).

**Anthus cervinus (Pallas). RED-THROATED PIPIT.**

*Motacilla cervina* Pallas, Zoogr. Rosso-Asiat., 1, p. 511, "1811"=1827—"in Siberia tantum maxime orientali, circa Covyma fl. itemque in Camtschatca et insulis versus Americam sitis frequens est, unde specimina attulit amic. Billings" (type locality, therefore, Kamchatka); Ridgway, Proc. U. S. Nat. Mus., 6, p. 156, 1883—San José del Cabo, Lower California (Jan. 26, 1883); Belding, l.c., 6, p. 350, 1883—San José del Cabo (date wrongly given as Feb. 7, 1883); Turner, Contrib. Nat. Hist. Alaska, p. 180, pl. 9, 1886—St. Michael, Alaska; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 15, 1904 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 207, 1928—San José del Cabo, Lower California.

*Range*.—Tundras of northern Siberia and locally in northern Europe; winters southward to southern China, Egypt, and Abyssinia; accidental in western Alaska (St. Michael, 1867, date not recorded) and Lower California (San José del Cabo, Jan. 26, 1883).<sup>1</sup>

**\*Anthus spragueii (Audubon). SPRAGUE'S PIPIT.**

*Alauda spragueii* Audubon, Bds. Amer. (8vo ed.), 7, p. 334, pl. 486, 1844—near Fort Union, western North Dakota (cotypes in U. S. National Museum and Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 18, 1899).

*Anthus spraguei*(i) Baird, Rev. Amer. Bds., 1, p. 155, 1864—plains of Yellowstone and upper Missouri to Saskatchewan (monog.); Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 136, 1886—Puebla, Mexico; Salvin and Godman, Ibis, 1889, p. 236—near Vera Cruz City, Vera Cruz; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 20, 1904 (monog., full bibliog.).

*Neocorys spraguei* Sharpe, Cat. Bds. Brit. Mus., 10, p. 620, 1885 (monog.).

*Range*.—Transition zone of North America, from west-central Saskatchewan and southern Manitoba south to western Montana and North Dakota; winters from Texas, southern Louisiana, and southern Mississippi through eastern and central Mexico to Vera Cruz, Puebla, and Michoacan; casual in Florida, Georgia, and South Carolina.

6: Saskatchewan (Quill Lake, 1); Texas (Kendall County, 1; Corpus Christi, 1; Port O'Connor, 1; Harlingen, 1); Guerrero (Iguala, 1).

<sup>1</sup> "Aleutian Islands" is credited to Zander (Journ. Orn., 1, Extraheft, p. 64, 1853). This author, however, does not say a word about the occurrence of the species on those islands, but merely repeats Pallas's statement that it ranges as far as the "islands toward America."

**\**Anthus furcatus furcatus* Lafresnaye and d'Orbigny.<sup>1</sup> SHORT-CLAWED PIPIT.**

*Anthus furcatus* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 27, 1837—Patagonia=Carmen, lower Rio Negro (type in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 227, 1838—part, Carmen, Patagonia; Darwin, Zool. Beagle, 3, p. 85, 1839—northern bank of the La Plata; Sclater, Ibis, 1878, p. 364—part, Conchitas, Buenos Aires, and Patagonia (crit.); Doering, in Roca, Inf. Of. Exp. Rio Negro, Zool., p. 37, 1881—Rio Azúl, Carhue, Nueva Roma, etc., southern Buenos Aires; Holmberg, Act. Acad. Nac. Cienc. Córdoba, 5, p. 80, 1884—Tandil, Prov. Buenos Aires; Sharpe, Cat. Bds. Brit. Mus., 10, p. 605, 1885—part, from Patagonia to the La Plata; Sclater and Hudson, Arg. Orn., 1, p. 19, 1888—Conchitas, Prov. Buenos Aires; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Córdoba, 10, p. 398, 1890—Córdoba; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 367, 1910 (range); Grant, Ibis, 1911, p. 87—Los Yngleses, Ajó, Buenos Aires (habits, breeding); Bertoni, Rev. Chil. Hist. Nat., 17, p. 220, 1917—Puerto Bertoni, Paraguay; idem, Faun. Parag., p. 60, 1914—Puerto Bertoni; Gibson, Ibis, 1918, p. 379—Cape San Antonio, Buenos Aires (eggs descr.); Daguerre, El Hornero, 2, p. 270, 1922—Rosas, Buenos Aires; Pereyra, l.c., 3, p. 171, 1923—Zelaya, Buenos Aires; Niedfeld, l.c., p. 189, 1923—Santa Fé; Wilson, l.c., p. 360, 1926—General López, Santa Fé.

<sup>1</sup> This appears to be the earliest certain name for this species, which is easily recognizable among its affines by the stout, basally widened bill, and the short, strongly curved hind claw. There is a possibility that *Anthus chii* Vieillot (Nouv. Dict. Hist. Nat., nouv. éd., 26, p. 490, 1818), based on "Chii" Azara, No. 146, might apply to the present species, as Azara's note on its song would seem to indicate. However, his description of the bird is so ambiguous that it is deemed best to drop the name altogether as unidentifiable. Bertoni (Rev. Chil. Hist. Nat., 17, p. 219, 1913) claims to have rediscovered at Asunción and "in the southern region explored by Noceda" Azara's species, which, he adds, is probably of very limited distribution and unknown to European ornithologists. Judging from his remarks and measurements (wing, 62; tail, 47), I am inclined to believe that he had in hand worn specimens of *A. l. lutescens*. *Anthus turdinus* Merrem (in Ersch and Gruber, Allg. Encycl. Wiss., 4, p. 290, 1820) is another name exclusively based on "Chii" Azara, and cannot be used for any other species.

It remains to say a few words on the much disputed "Variole" of Buffon (Hist. Nat. Ois., 5, p. 63) and "Petite Alouette, de Buenos Ayres" of Daubenton (Pl. Enl., pl. 738, fig. 1). Both were based on Commerson's drawing of a bird from the vicinity of Buenos Aires, and no type exists. The figure is so poor that Ridgway (Bull. U. S. Nat. Mus., 50, Part 3, p. 22 [footnote a], 1904) even suggested it might represent a young shorelark, and every attempt at its identification seems futile. The various names bestowed on it, a list of which is given below, must consequently be disregarded as unidentifiable.

*Alauda rufa* (not *Alauda rufa* Gmelin, p. 792) Gmelin, Syst. Nat., 1, (2), p. 798, 1789—based on "La Variole" Buffon and "Petite Alouette, de Buenos Ayres" Daubenton, Pl. Enl., pl. 738, fig. 1.

*Alauda bonariensis* Bonnatere, Tabl. Enc. Méth., Orn., 1, p. 317, 1792—based on "La Variole" Buffon.

*Alauda variolata* Suckow, Anfangsgr. Naturg. Thiere, 2, (2), p. 717, 1801—based on "La Variole" Buffon and Daubenton, Pl. Enl., pl. 738, fig. 1.

*Anthus variegatus* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 26, p. 499, 1818—based on the same references.



*Anthus furcatus furcatus* Hartert and Venturi, Nov. Zool., 16, p. 165, pl. 2, figs. 13–16 (eggs), 1909—part, Barracas al Sud, Buenos Aires; Hellmayr, El Hornero, 2, p. 181, 1921—Santa Fé (Ocampo), Buenos Aires, and Rio Negro (monog.); idem, Nov. Zool., 30, p. 224, 1923—Patagonia (crit. note on type); Peters, El Hornero, 3, p. 197, 1923—Tunuyán, Mendoza; idem, Bull. Mus. Comp. Zool., 65, p. 329, 1923—Huanuluan, western Rio Negro; Marelli, Mem. Min. Obr. Públ. for 1922–23, p. 655, 1924—Prov. Buenos Aires to Patagonia; Wetmore, Bull. U. S. Nat. Mus., 133, p. 360, 1926—Uruguay (Rio Negro, Bañado de la India Muerta, south of Lazcano, San Vicente), Argentina (Berazategui, fifteen miles south of Cape Antonio, Carhue, Bahía Blanca, Buenos Aires; Victorica, Pampa), and Brazil (Rio Grande, Rio Grande do Sul) (habits, nest and eggs); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 302, 1930—Estancia La Germania, Santa Fé.

*Anthus variegatus* (not of Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 26, 1837—"avis junior," part, La Plata.

*Anthus correndera* (not of Vieillot) Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 139—Conchitas, Buenos Aires (part; spec. examined in British Museum and Berlepsch Collection); Hudson, l.c., 1873, p. 771—Buenos Aires (in part; habits); Durnford, Ibis, 1877, p. 32—part, Flores, Buenos Aires (spec. in British Museum examined); idem, Ibis, 1878, p. 168—Buenos Aires (in part); White, Proc. Zool. Soc. Lond., 1882, p. 594—Flores, Buenos Aires (spec. in Berlepsch Collection examined); Holland, Ibis, 1890, p. 425—Estancia Espartillar, Buenos Aires; idem, Ibis, 1892, p. 195—Estancia Espartillar (spec. in British Museum examined); Aplin, Ibis, 1894, p. 163, pl. 5, fig. 1—Uruguay (song, nest, and eggs descr.; spec. in British Museum examined).

*Anthus rufus* (not *Alauda rufa* Gmelin) Durnford, Ibis, 1876, p. 158—Buenos Aires (in part).

**Range.**—Northern Argentina, south to the Rio Negro; Paraguay; Uruguay; and extreme southern Brazil (Rio Grande do Sul).<sup>1</sup>

33: Argentina (La Independencia, Las Rosas, Prov. Santa Fé, 1; Torrecita, Prov. Buenos Aires, 1; Concepción, Tucumán, 31).

**\**Anthus furcatus brevirostris* Taczanowski.<sup>2</sup> SHORT-BILLED PIPIT.**

<sup>1</sup> Birds from Concepción, Tucumán, when compared with others in corresponding plumage from Buenos Aires prove to be inseparable, though a few have as much white in the tail as *A. f. brevirostris*.

**Additional material examined.**—Argentina, Santa Fé: Ocampo, 1.—Buenos Aires: Barracas al Sud, 7; Conchitas (H. W. Hudson), 2; San José de Flores (H. Durnford and E. W. White), 4; La Plata (E. W. White), 1; Avellaneda, 2; Buenos Aires, 4; Estancia Espartillar (adult female, worn breeding; A. H. Holland), 1; Carmen, Rio Negro, 1 (the type).—Uruguay: Colonia (Campbell), 1; Santa Elena (O. V. Aplin), 5.

<sup>2</sup> *Anthus furcatus brevirostris* Taczanowski: Similar to *A. f. furcatus*, but upper parts much more rufescent, tawny olive rather than buffy drab, passing

*Anthus brevirostris* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 507—Junín, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 166, 1927).

*Anthus variegatus* (not Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 26, 1837—"avis junior," part, Cochabamba, Bolivia.

*Anthus furcatus* (not of Lafresnaye and d'Orbigny) d'Orbigny, Voy. Amér. Mérid., Ois., p. 227, 1838—part, Cochabamba, Bolivia; Sclater, Ibis, 1878, p. 364—part, Peru and Bolivia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 593—Cochabamba (ex d'Orbigny); Taczanowski, Orn. Pér., 1, p. 459, 1884—Junín, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 605, 1885—part, Bolivia and Peru; Berlepsch and Stolzmann, Ornith., 13, p. 126, 1906—Puno, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 108, 1921—Ttica-tica, Cuzco, and Tirapata, Puno, Peru.

*Anthus furcatus furcatus* Hartert and Venturi, Nov. Zool., 16, p. 165, 1909—part, Valle Grande, Bolivia.

*Anthus furcatus brevirostris* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 330—Ingapirca, Junín, Peru (crit.); Hellmayr, El Hornero, 2, p. 182, 1921—Peru and Bolivia (crit.); idem, Nov. Zool., 30, p. 223, 1923—Cochabamba, Bolivia (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 413, 1930—Huánuco Viejo, Peru (crit.).

*Range*.—Puna zone of Peru (in depts. of Huánuco, Junín, Cuzco, and Puno) and Bolivia.<sup>1</sup>

6: Peru (Huánuco Viejo, Huánuco, 2; Puno, Puno, 4).

\**Anthus lutescens lutescens* Pucheran. YELLOWISH PIPIT.

*Anthus lutescens* (Cuvier MS.)<sup>2</sup> Pucheran, Arch. Mus. Hist. Nat. Paris, 7, p. 343, 1855—"Brésil"—vicinity of Rio de Janeiro (type in Paris Museum examined); Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 114, 1885—Taquara-do Mundo Novo, Rio Grande do Sul; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 116, 1899—Mundo Novo; idem, Rev. Mus. Paul., 3, p. 132, 1899—Iguapé, São Paulo; Ihering, l.c., 4, pp. 152, 202, 1900—Nova Friburgo, Rio (nest); Hellmayr, Nov. Zool., 13, p. 307, 1906 (crit.

into clay color on the lower back and rump; chest and sides deeper buff; white area on external rectrices slightly more extensive; size somewhat larger.

Mr. Zimmer cast doubts on the validity of this race, but all the specimens in Field Museum except one happen to be in worn plumage, when the subspecific characters are obliterated through abrasion. With an ample series of freshly molted birds from Peru and Bolivia I have no difficulty in distinguishing *A. f. brevirostris* from its southern ally.

*Additional material examined*.—Peru: Ingapirca, Junín, 2; Anta, Cuzco, 11.—Bolivia: Vacas, 1; Valle Grande, 5; Cochabamba, 2.

<sup>1</sup> *Anthus* sp. inc. Sclater (Proc. Zool. Soc. Lond., 1886, p. 397—Sacaya, Cordillera of Tarapacá, northern Chile) may possibly belong to *A. f. brevirostris*. Ambrose Lane obtained a single young male, which Sclater thought to be nearest to *A. furcatus*. Unfortunately, this specimen cannot now be found in the collection of the British Museum.

<sup>2</sup> *Anthus lutescens* ("Cuvier") Lesson (Traité d'Orn., p. 424, 1831) is a nomen nudum.

note on type); Ihering, Cat. Faun. Braz., 1, p. 330, 1907—São Paulo (Iguapé, Cachoeira, São Sebastião, Barretos, Bebedouro), Matto Grosso (Porto da Faya), and Espirito Santo (Rio Doce); Chubb, Ibis, 1910, p. 614—Sapucay, Paraguay; Bertoni, Rev. Chil. Hist. Nat., 17, p. 220, 1913—Puerto Bertoni, Paraguay; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 208, 1913—La Pedrita, Uracoa, Delta Amacuro, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 473, 1914—Pará, Benevides, Quati-Purú, Marajó (Chaves, Pacoval, Pindobal), Cussary, and Rio Maecurú, Brazil; Serié and Smyth, El Hornero, 3, p. 52, 1923—Santa Elena, Entre Rios; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—São Bento, Maranhão; Smyth, El Hornero, 4, p. 144, 1928—Cacharí, Buenos Aires (eggs descr.); Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 173, 1928—Pará, Brazil.

*Anthus lutescens lutescens* Hellmayr, Nov. Zool., 13, p. 307, 1906—Brazil (from Pará to São Paulo), west to Corrientes and Tucumán; Hartert and Venturi, l.c., 16, p. 164, pl. 2, figs. 8–12 (eggs), 1909—Barracas al Sud, Buenos Aires (nesting habits, eggs); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 367, 1910—Tucumán and Barracas al Sud; Hellmayr, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, pp. 99, 118, 123, 1912—Mexiana and Marajó, Brazil (crit.); idem, El Hornero, 2, p. 183, 1921 (range, crit., meas.); idem, Nov. Zool., 30, p. 223, 1923—Corrientes and Rio de Janeiro; idem, Field Mus. Nat. Hist., Zool. Ser., 12, p. 267, 1929—Maranhão (São Bento, Mangunça Island); Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 172, 1925—Rio Parnahyba and Amarração, Piahy; Wetmore, Bull. U. S. Nat. Mus., 133, p. 363, 1926—Chaco (Las Palmas), Formosa (Riacho Pilaga), and Paraguay (Puerto Pinasco); Friedmann, Bull. Mus. Comp. Zool., 68, p. 214, 1927—Concepción, Tucumán; Pereyra, El Hornero, 4, p. 33, 1927—San Rafael, Mendoza; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 302, 1930—Estancia La Germania, Santa Fé; Naumburg, Bull. Amer. Mus. N. H., 60, p. 341, 1930—Matto Grosso; Chapman, l.c., 63, p. 118, 1931—Roraima (Paulo and Arabupu).

*Anthus lutescens* subsp. Hellmayr, Nov. Zool., 13, p. 307, 1906—British Guiana (Roraima, Rio Rupununi, Annai) and Colombia (Bogotá); Berlepsch, l.c., 15, p. 109, 1908—Cayenne, French Guiana.

*Anthus (Alauda) chii* (not of Vieillot) Spix, Av. Bras., 1, p. 75, pls. 76–77, fig. 2, 1824—Rio São Francisco, Bahia; Hellmayr, Abhandl. 2. Kl. Bayr. Akad. Wiss., 22, No. 3, p. 625, 1906 (crit.).

*Anthus chii* Wied, Beitr. Naturg. Bras., 3, (1), p. 631, 1830—southern Brazil; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 26, 1837—Corrientes; d'Orbigny, Voy. Amér. Mérid., Ois., p. 225, 1838—Banda Oriental (Maldonado, Montevideo), La Plata, and Corrientes; Gould, in Darwin, Zool. Beagle, 3, p. 85, 1839—part, Rio de Janeiro; Sclater, Cat. Coll. Amer. Bds., p. 24, 1862—Mexiana and southern Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 569—Mexiana (spec. examined); Pelzel, Orn. Bras., 2, p. 69, 1868—Rio de Janeiro (spec. examined); (?) Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 446—Minas Geraes (Lagôa dos Porcos, near Paracatú; Sete Lagôas).

*Anthus rufus* (not *Alauda rufa* Gmelin) Burmeister, Syst. Ueber. Th. Bras., 3, p. 118, 1856—Nova Friburgo; (?) Sternberg, Journ. Orn., 17, p. 268, 1869—Buenos Aires (nesting habits); (?) Holtz, l.c., 18, p. 9, 1870 (egg descr.); Sclater, Ibis, 1878, p. 360—part, Brazil (Rio, Bahia, Mexiana) and Guiana, "Trinidad"; Berlepsch, Ibis, 1884, p. 432—Angostura, Orinoco River, Venezuela (spec. examined); Salvin, Ibis, 1885, p. 202—Merumé Mountains and Roraima, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, p. 606, 1885—part, Rio Grande do Sul (Pelotas), Rio de Janeiro, Pernambuco, Mexiana, Merumé Mountains, and Roraima; Riker and Chapman, Auk, 7, p. 266, 1890—Diamantina, Santarém; Allen, Bull. Amer. Mus. N. H., 3, p. 344, 1891—Corumbá, Matto Grosso; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 3, 1900—Matto Grosso; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 173, 1902—Rio Salí, Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Rio Salí; Reiser, Denks. Math.-Naturwiss. Kl. Akad. Wiss. Wien, 76, p. 79, 1910—Bahia (Sambaiba, Rio São Francisco) and Piauhý (Queimadas, Rio Parnahyba, and coast strip); Penard and Penard, Voy. Guyana, 2, p. 491, 1910—Surinam.

*Notiocorys abariensis* Chubb, Bull. Brit. Orn. Cl., 41, p. 79, 1921—Abary River, British Guiana (type in McConnell Collection, now in British Museum, examined); idem, Bds. Brit. Guiana, 2, p. 420, 1921—Abary River, Roraima, and Merumé Mountains; Young, Ibis, 1929, p. 241—Blairmont and Abary River (habits, song).

*Range*.—Northern Argentina east of the Andes, south to Mendoza, Santa Fé, Corrientes, and Buenos Aires; Uruguay; Paraguay; eastern Bolivia; the greater part of Brazil, locally in the Amazon Valley; Guianas and Venezuela (locally in the Orinoco basin), west apparently to the llanos of the Rio Meta, eastern Colombia.<sup>1</sup>

<sup>1</sup> Further subdivision of this form seems impracticable. Birds from Bolivia and Tucumán are on average more deeply yellowish below, with heavier dusky markings on chest and sides, and somewhat darker, less brownish on the upper parts, when compared with Brazilian skins. The two series being, however, not quite comparable as to season, more comprehensive material of this notoriously variable group should be studied before any formal separation is proposed. Birds from the Guianas and the adjacent parts of Brazil (Bôa Vista and Serra da Lua, Rio Branco), a single specimen from the Orinoco (Angostura=Ciudad Bolívar), and a skin of the well-known "Bogotá" preparation, while identical with those from eastern Brazil in coloration of upper parts and markings of lower surface, differ nevertheless by the reduction of the dusky inner margin on the two lateral rectrices, the outermost feather being almost entirely white as in *A. l. parvus*. Numerous individuals, however, can hardly be told apart, and the propriety of maintaining *A. l. abariensis* on such a slight divergency seems extremely questionable. Specimens from Roraima and Merumé Mountains have, as a rule, larger bills, but I have failed to discern any difference in coloration that is not attributable to season. Chubb's description of *N. abariensis* is fairly confused and, in several points, at variance with the characters of the marked type.

*Additional material examined*.—Brazil: Rio de Janeiro, 8; Taquara, Rio Grande do Sul, 2; Bahia, 12; Island of Sambaiba, Rio São Francisco, Bahia, 2; Queimadas, Rio Parnahyba, Piauhý, 1; Amaração, Piauhý, 9; Mexiana, 2; Marajó, 5.—Paraguay: Villa Rica, 1.—Bolivia: Santa Cruz de la Sierra, 1.—Argentina: Corrientes, 1; Tucumán, 8.—French Guiana: Cayenne, 1.—British Guiana: Roraima, 11; Merumé Mountains, 1; Annai, 3; Rio Rupununi, 2; Abary River, 5.—Venezuela: Angostura, 1.—Colombia: "Bogotá," 1.

31: Argentina (Concepción, Tucumán, 13); Bolivia (Buenavista, Santa Cruz, 2; Todos Santos, 3); Brazil (Bahia, 1; São Marcello, Rio Preto, Bahia, 1; São Bento, Maranhão, 2; Mangunça Island, Maranhão, 1; Bôa Vista, Rio Branco, 7; Serra da Lua, near Bôa Vista, Rio Branco, 1).

**\**Anthus lutescens parvus* Lawrence.<sup>1</sup> PANAMA PIPIT.**

*Anthus (Notiocorys) parvus* Lawrence, Proc. Acad. Nat. Sci. Phila., 17, p. 106, June, 1865—savannah near Panama City (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York).

*Anthus rufus* (not *Alauda rufa* Gmelin) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 322, 1862—savannahs near Panama City; Baird, Rev. Amer. Bds., 1, p. 156, 1864—Panama (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 346—Panama (ex Lawrence); Sclater, Ibis, 1878, p. 360—part, Panama (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 108, 1880—part, Panama (Santa Fé and Panama Railroad); Sharpe, Cat. Bds. Brit. Mus., 10, p. 606, 1885—part, Panama and Veragua (Santa Fé).

*Anthus parvus* Salvin, Proc. Zool. Soc. Lond., 1867, p. 135—Santa Fé, Veragua (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 22, 1904—Isthmus of Panama (Panama City), Chiriquí (Divala), and Veragua (Santa Fé); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 220, 1906—savannah of Panama.

*Anthus rufus parvus* Bangs, Auk, 18, p. 368, 1901—Divala, Chiriquí.

*Anthus lutescens parvus* Hellmayr, Nov. Zool., 13, p. 307, 1906—Panama, Veragua, and Chiriquí (crit.); idem, El Hornéro, 2, p. 184, 1921—Panama (diag.).

**Range.**—Panama, from the Isthmus (Panama City, Balboa) west to Chiriquí (Divala, Frances).

2: Panama (Balboa, 2).

**\**Anthus lutescens peruvianus* Nicholson.<sup>2</sup> PERUVIAN PIPIT.**

<sup>1</sup> *Anthus lutescens parvus* Lawrence: Differs from *A. l. lutescens* by darker, brownish rather than buffy chest with heavier dusky markings; distinct dusky streaks on the flanks; the reduction of the dusky inner margin on the lateral rectrices, which is nearly evanescent on the outermost pair; darker brown edges to the upper parts, etc.

**Additional material examined.**—Panama: savannah near Panama, 3; Frances (alt. 2,000 ft.), Chiriquí, 6; "Chiriquí," 2.

<sup>2</sup> *Anthus lutescens peruvianus* Nicholson: Similar to *A. l. lutescens*, but on average larger; upper parts with broader as well as more whitish edges to the lateral interscapulars and paler markings to the wing coverts; ventral surface whiter, with paler, if any, buffy suffusion across chest and along flanks; dusky margin to inner web of lateral rectrices much reduced in extent, even more so than in *A. l. parvus*.

Birds from northern Chile agree with a Peruvian series. This form appears to be restricted to the arid Tropical zone. The localities "Tinta" and "Arequipa," as recorded by Sclater, Salvin, and Sharpe, are erroneous. There is no specimen

*Anthus peruvianus* Nicholson, Proc. Zool. Soc. Lond., 1878, p. 390—Catarindos Valley and Islay, Dept. Arequipa, southern Peru (type, from Catarindos Valley [near Islay], in British Museum examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 609, 1885—Catarindos Valley, Islay, "Tinta" (errore), and Lima, Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Lima.

*Anthus chii* (not of Vieillot) Tschudi, Arch. Naturg., 10, (1), p. 283, 1844—Peru; idem, Faun. Peru., Aves, p. 191, 1846—Peru; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 506—Lima (habits).

*Anthus* sp. (?) Nation, Proc. Zool. Soc. Lond., 1866, p. 97—near Lima (spec. examined).

*Anthus rufus* (not *Alauda rufa* Gmelin) Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 984—Islay; idem, l.c., 1868, p. 173—Tambo River, thirty miles south of Islay; idem, l.c., 1868, pp. 568, 569—"Arequipa"; Sclater, Ibis, 1878, p. 360—part, Peru (Lima, Islay, "Arequipa"); Taczanowski, Orn. Pér., 1, p. 460, 1884—Lima (eggs descr.).

*Anthus lutescens peruvianus* Hellmayr, Nov. Zool., 13, p. 307, 1906—coast region of Peru from Trujillo to Islay; idem, El Hornero, 2, p. 184, 1921—littoral of Peru (crit.); idem, Field Mus. Nat. Hist., Zool. Ser., 19, p. 44, 1932—Chacalluta, Tacna, Chile (crit.).

**Range.**—Littoral of extreme northern Chile (Tacna Province) and Peru north to Trujillo.

5: Chile (Chacalluta, Tacna, 5).

### ***Anthus correndera calcaratus* Taczanowski.<sup>1</sup> TACZANOWSKI'S PIPIT.**

*Anthus calcaratus* Taczanowski, Proc. Zool. Soc. Lond., Nov., 1874, p. 507, pub. 1875—Junín, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 167, 1927); Berlepsch and Stolzmann, l.c., 1896, p. 330—Ingapirca, Junín; idem, Ornith., 13, p. 126, 1906—Puno, Peru.

*Anthus correndera* (not of Vieillot) Sclater, Ibis, 1878, p. 362—part, Peru; Taczanowski, Orn. Pér., 1, p. 458, 1884—Junín; Sharpe, Cat. Bds. Brit. Mus., 10, p. 610, 1885—part, Peru.

from either of these places in the British Museum, and I suppose they both refer to a male collected on October 25, 1867, in the Tambo Valley, preserved in that collection.

**Additional material examined.**—Peru: Trujillo, 7; Lima, 5; Catarindos Valley, 1 (the type); Islay, 2; Tambo Valley, 1.

<sup>1</sup> *Anthus correndera calcaratus* Taczanowski: Nearest to *A. c. chilensis*, but coloration much more fulvous throughout, this being particularly noticeable on the edges to the feathers of the dorsal plumage, on the rump, and on the chest; light area on the lateral rectrices more extensive and more purely white, the dusky inner margin on the outermost pair being restricted to the extreme base and wholly concealed by the under tail coverts; bill longer and slenderer. Wing, 76–78, (female) 74–76; tail, 54–57; bill, 13–14.

**Material examined.**—Peru: Ingapirca, Junín, 3; Anta, Cuzco, 2.

*Anthus correndera calcaratus* Hellmayr, El Hornero, 2, p. 187, 1921—Ingapirca (Junín), Anta (Cuzco), and Puno, Peru (crit.).

*Range*.—Puna zone of Peru, from Junín to Cuzco and Puno.

**\**Anthus correndera catamarcae* Hellmayr.<sup>1</sup> CATAMARCA PIPIT.**

*Anthus correndera catamarcae* Hellmayr, El Hornero, 2, p. 186, 1921—Lago Colorado (alt. 3,400 meters), Catamarca, Argentina (type in Munich Museum); idem, Field Mus. Nat. Hist., Zool. Ser., 19, p. 42, 1932—Calama, Rio Loa, Ojo de San Pedro, and twenty miles east of San Pedro, Antofagasta, Chile (crit.).

*Anthus chii* (not of Vieillot) Philippi, Ornith., 4, p. 159, 1888—Antofagasta.

*Anthus calcaratus* (not of Taczanowski) Berlepsch and Leverkühn, Ornith., 6, p. 8, 1890—Calama, Antofagasta (crit.; spec. examined).

*Range*.—Puna zone of northern Chile (Antofagasta) and extreme northwestern Argentina (Los Andes and Catamarca).

10: Chile, Antofagasta (Rio Loa, 6; Ojo de San Pedro, 1; twenty miles east of San Pedro, 3).<sup>2</sup>

**\**Anthus correndera chilensis* (Lesson).<sup>3</sup> CHILEAN PIPIT.**

*Corydalla chilensis* Lesson, Rev. Zool., 2, p. 101, 1839—Chile (type in Abeillé Collection, Bordeaux); idem, Oeuvr. Compl. Buffon, éd. Lévêque, 20, [=Descr. Mamm. et Ois.], p. 298, 1847—Chile (full descr.); Des Murs, in Gay, Hist. Fys. Pol. Chile, Zool., 1, p. 325, 1847—Chile (ex Lesson).

*Anthus chii* (not of Vieillot) Kittlitz, Denkw. Reise, 1, pp. 163, 178, 1858—Lagunilla Valley and Quillota, Valparaíso, Chile.

*Anthus furcatus* (not of Lafresnaye and d'Orbigny) Pelzeln, Reise Novara, Zool., 1, Vögel, p. 69, 1865—Chile (spec. in Vienna Museum examined).

<sup>1</sup> *Anthus correndera catamarcae* Hellmayr: Very similar to *A. c. calcaratus* in coloration except for the slightly paler, not quite so deeply ochraceous upper parts and chest, but decidedly larger. Wing, 79–83, (female) 77–79; tail, 58–63, (female) 57–59; bill, 12½–14.

*Additional material examined*.—Chile: Calama, Antofagasta, 1.—Argentina: Lago Colorado, Catamarca, 3; Lago Blanco, Catamarca, 1; Antofagasta, Los Andes, 1.

<sup>2</sup> A specimen in Field Museum received from Juan Mogensen is marked "Rio Gallegos, Patagonia, Nov. 20, 1914," doubtless owing to an accidental transposition of the label.

<sup>3</sup> *Anthus correndera chilensis* (Lesson): Very similar to *A. c. correndera*, but general coloration more buffy. Specimens from the Straits of Magellan (Punta Arenas) and extreme southern Patagonia (Rio Gallegos) are precisely like the Chilean ones. According to Wetmore (1926, p. 456), breeding birds from western Santa Cruz (Lago San Martín), while showing a certain tendency toward *correndera*, are nearest to the present form.

*Additional material examined*.—Chile: Ovalle, Coquimbo, 1; Santiago, 4; Tumbes, Concepción, 1; Valdivia, 2; unspecified, 6; Punta Arenas, Straits of Magellan, 2.

*Anthus correndera* (not of Vieillot) Darwin, Zool. Beagle, 3, p. 85, 1839—part, Chile; Fraser, Proc. Zool. Soc. Lond., 11, p. 112, 1843—Chile; Des Murs, in Gay, Hist. Fys. Pol. Chile, Zool., 1, p. 323, 1847—Chile; Frauenfeld, Verh. Zool. Bot. Ges. Wien, 10, Abhandl., p. 636, 1860—near Santiago; Selater, Proc. Zool. Soc. Lond., 1867, pp. 321, 337—Chile; Philippi, Anal. Univ. Chile, 31, p. 258, 1868—Chile; Reed, l.c., 49, p. 542, 1877—Cauquenes, Colchagua; Landbeck, Zool. Gart., 18, p. 244, 1877—Chile; Selater, Ibis, 1878, p. 362—part, Chile; Salvin, Proc. Zool. Soc. Lond., 1883, p. 419—Coquimbo, Chile; Sharpe, Cat. Bds. Brit. Mus., 10, p. 610, 1885—part, Chile; Ridgway, Proc. U. S. Nat. Mus., 12, p. 131, 1889—Gregory Bay and Point Elizabeth, Straits of Magellan; C. Burmeister, Anal. Mus. Nac. Buenos Aires, 3, p. 317, 1890—Rio Chico de Santa Cruz and Camp Chonquek-aik, southern Patagonia; Oustalet, Miss. Scient. Cap Horn, 6, p. B. 77, 1891—Punta Arenas and Ushuaia, Tierra del Fuego; Waugh and Lataste, Act. Soc. Scient. Chili, 4, p. LXXXV, 1894—Peñaflor, Santiago; idem, l.c., 4, p. CLXXI, 1895—San Alfonso, Quillota; Reed, Anal. Univ. Chile, 93, p. 199, 1896—Chile; Schalow, Zool. Jahrb., Suppl., 4, p. 728, 1898—Tumbes (Talcaguano) and Punta Arenas, Chile; Albert, Anal. Univ. Chile, 101, p. 934, 1898—Chile (monog.); Dabbene, Anal. Mus. Nac. Buenos Aires, 8, p. 360, 1902—Tierra del Fuego; Crawshaw, Bds. Tierra del Fuego, p. 45, 1907—Useless Bay; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 367, 1910—part, Tierra del Fuego; Barros, Rev. Chil. Hist. Nat., 25, p. 187, 1921—Los Andes, Aconcagua, Chile; Housse, l.c., 29, p. 145, 1925—San Bernardo, Santiago; idem, l.c., p. 226, 1925—Isla La Mocha, Chile; Barros, l.c., 30, p. 142, 1926—Nilahue, Curicó; Bullock, l.c., 33, p. 185, 1929—Angol, Malleco; Barros, l.c., p. 362, 1929—Aconcagua.

*Anthus correndera correndera* Stone, Rep. Princet. Univ. Exp. Patag., 2, p. 827, 1928—Rio Coy, Mount Tigre, and Cape Fairweather, Patagonia.

*Anthus correndera chilensis* Hellmayr, El Hornero, 2, p. 186, 1921—Chile (crit.); Paessler, Journ. Orn., 70, p. 475, 1922—Coronel, Chile (nest and eggs); Wetmore, Bull. U. S. Nat. Mus., 133, p. 363, 1926—near Concon, Valparaiso (crit.); idem, Univ. Calif. Pub. Zool., 24, p. 456, 1926—Lago San Martín, Santa Cruz, Patagonia (crit.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 40, 1932—Chile, from Atacama to the Straits of Magellan (crit.).

*Range.*—Chile, from the Copiapó Valley, Atacama, south to the Straits of Magellan and Tierra del Fuego, and extreme southern Patagonia, north to about latitude 48° south (Lago San Martín and Rio Chico, Dept. Santa Cruz).

26: Chile (Ramadilla, Copiapó Valley, Atacama, 3; Romero, Coquimbo, 6; Batuco, Santiago, 1; Concepción, 6; Lake Gualletué, Cautin, 7; Casa Richards, Rio Nirehuau, Llanquihue, 1); Argentina (Rio Gallegos, Patagonia, 2).



**\**Anthus correndera grayi* Bonaparte.<sup>1</sup> FALKLAND PIPIT.**

*Anthus grayi* Bonaparte, Cons. Gen. Av., 1, p. 249, 1850—based on *Alauda novae zealandiae*, var.  $\beta$ , of Latham (Ind. Orn., 2, p. 497, 1790), which, in its turn, is based on "Cinereous Lark" [of the Falkland Islands] Portlock, Voy. round the World, 1789, pl. facing p. 38; "Oceania"=near Port Egmont, Falkland Islands; Mathews and Iredale, Austr. Av. Rec., 4, p. 150, 1921.<sup>2</sup>

*Anthus phillipsi* Brooks, Proc. New Engl. Zool. Cl., 6, p. 26, June, 1916—Port Stanley, East Falkland Island (type in Museum of Comparative Zoology, Cambridge, Mass.); idem, Bull. Mus. Comp. Zool., 61, p. 159, 1917—Falkland Islands.

*Anthus correndera* (not of Vieillot) Gould, in Darwin, Zool. Beagle, 3, p. 85, 1839—part, Falkland Islands; idem, Proc. Zool. Soc. Lond., 27, p. 95, 1859—Falkland Islands; Sclater, l.c., 28, p. 384, 1860—Falkland Islands; Abbott, Ibis, 1861, p. 153—East Falkland (habits); Sclater, Cat. Coll. Amer. Bds., p. 24, 1862—Falkland Islands; idem, Ibis, 1878, p. 362—part, Falkland Islands; Sharpe, Cat. Bds. Brit. Mus., 10, p. 610, 1885—part, Falkland Islands; C. Burmeister, Anal. Mus. Nac. Buenos Aires, 3, p. 244, 1888—part, Islas Malvinas; Dabbene, l.c., 8, p. 360, 1902—part, Islas Malvinas; Vallentin, in Boyson, The Falkland Islands, p. 333, 1924 (nest and eggs descr.).

*Anthus antarcticus* (not of Cabanis) Vallentin, Mem. Proc. Manchester Lit. Philos. Soc., 48, No. 23, p. 42, 1904—Falkland Islands.

*Anthus correndera phillipsi* Hellmayr, El Hornero, 2, p. 186, 1921—Malouines (crit.); Wace, l.c., p. 204, 1921—Falkland Islands; Bennett, Ibis, 1926, p. 332—Falkland Islands.

*Anthus correndera grayi* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 41, 1932 (crit.).

*Range*.—Falkland Islands.

2: West Falkland Island (Port Stephens, 2).

**\**Anthus correndera correndera* Vieillot. CORRENDERA PIPIT.**

*Anthus correndera* Vieillot,<sup>3</sup> Nouv. Dict. Hist. Nat., nouv. éd., 26, p. 491, 1818—based on "La Correndera" Azara, No. 145; "Paraguay" down

<sup>1</sup> *Anthus correndera grayi* Bonaparte: Nearest to *A. c. chilensis*, but slightly larger with stronger bill and smaller dusky pectoral markings. Wing, 79–82; tail, 60–64; tars., 22–24; bill, 12–13.

*Additional specimens examined*.—West Falkland: Port Stephens, 3.—"Falkland Islands," 5.

<sup>2</sup> The pertinence of the Falkland Islands "variety" of Portlock's "Cinereous Lark" to the Pipit was first pointed out by Mathews and Iredale, although the wording of their explanation is hardly intelligible.

<sup>3</sup> Azara's account of "La Correndera" is by no means clear and has been referred to *A. nattereri* by Bertoni (Rev. Chil. Hist. Nat., 17, p. 218, 1913). Still, various details in his description, taken in conjunction with the habitat, which is said to extend to the La Plata River, where Natterer's Pipit is not known to occur, point rather to the species we are accustomed to call by Vieillot's name. I do not think there is any necessity for making a change in current nomenclature.

to the Rio de La Plata; d'Orbigny, Voy. Amér. Mérid., Ois., p. 225, 1838—Buenos Aires to Patagonia; Darwin, Zool. Beagle, 3, p. 85, 1839—part, La Plata; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 139—Conchitas, Buenos Aires (in part); Sclater, l.c., 1872, p. 548—Rio Negro; Hudson, l.c., 1873, p. 771—Buenos Aires (in part; habits); Durnford, Ibis, 1877, p. 32—Chubut Valley, Patagonia, and Punta Lara, Buenos Aires (in part);<sup>1</sup> idem, Ibis, 1877, p. 168—Buenos Aires, up the Paraná to Baradero (in part); idem, Ibis, 1878, p. 392—Chubut Valley; Sclater, Ibis, 1878, p. 362—part, Argentina and Uruguay; Doering, in Roca, Inf. Of. Exp. Rio Negro, Zool., p. 37, 1881—Rio Azúl, Rio Negro; (?) Barrows, Bull. Nutt. Orn. Cl., 8, p. 87, 1883—Concepción del Uruguay, Entre Rios; (?) Dalgleish, Proc. Roy. Phys. Soc. Edin., 8, p. 81, 1884—Tala, south bank of Rio Negro, Uruguay (nest and eggs descr.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 610, 1885—part, Mendoza, Rio Negro, Maldonado, and Buenos Aires; (?) Gibson, Ibis, 1885, p. 277—Paysandú, Uruguay; Sclater and Hudson, Arg. Orn., 1, p. 17, 1888—Argentina (habits); Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 398, 1890—Cordoba; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Rio Grande do Sul; idem, Rev. Mus. Paul., 5, "1901," p. 264, 1902—Iguapé, São Paulo; idem, Cat. Faun. Braz., 1, p. 330, 1907—part, Brazil (Iguapé, São Paulo; Nova Hamburgo, Rio Grande do Sul) and Argentina (Buenos Aires); Hartert and Venturi, Nov. Zool., 16, p. 164, pl. 2, figs. 17–19 (eggs), 1909—part, Barracas al Sud, Buenos Aires, and São Sebastião, São Paulo; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 367, 1910 (range, excl. Tierra del Fuego); Grant, Ibis, 1911, p. 86—Los Yngleses, Ajó, Buenos Aires (breeding); Hussey, Auk, 33, p. 396, 1916—La Plata; Gibson, Ibis, 1918, p. 378—Cape San Antonio (eggs descr.); Marelli, El Hornero, 1, p. 79, 1918—Curuzú Cuatiá, Corrientes; Sanzin, l.c., p. 151, 1918—Alto Verde and Los Arboles, Mendoza; (?) Tremoleras, l.c., 2, p. 22, 1920—Uruguay (Montevideo, Canelones, San José, Florida, Maldonado); Daguerre, l.c., p. 270, 1922—Rosas, Buenos Aires; Serié and Smyth, l.c., 3, p. 52, 1923—Santa Elena, Entre Rios; Pereyra, l.c., p. 170, 1923—Zelaya, Buenos Aires; Niedfeld, l.c., p. 189, 1923—Santa Fé; Wilson, l.c., p. 360, 1926—General Lopez, Santa Fé; Smyth, l.c., 4, p. 143, 1928—Cacharí, Buenos Aires (eggs descr.).

*Anthus correndera correndera* Hellmayr, El Hornero, 2, p. 185, 1921—Argentina, Uruguay, and southern Brazil (monog.); idem, Nov. Zool., 30, p. 223, 1923—Buenos Aires; Peters, Bull. Mus. Comp. Zool., 65, p. 329, 1923—Huanuluan, western Rio Negro; Marelli, Mem. Min. Obr. Públ. for 1922–23, p. 655, 1924 (range, excl. Chile); Wetmore, Bull. U. S. Nat. Mus., 133, p. 361, 1926—Uruguay (San Vicente), Buenos Aires (Dolores, Lavalle, Guaminí), Neuquen (Zapala), and Tunuyán, Mendoza (crit., habits); idem, Univ. Calif. Pub. Zool., 24, p. 456, 1926—Paja Alta, Rio Negro (crit.); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 303, 1930—Estancia La Germania, Santa Fé.

<sup>1</sup> Durnford did not distinguish between this species and *A. f. furcatus*. A specimen in the British Museum collected by him on September 27, 1875, at Flores, Buenos Aires, pertains to the latter.

*Anthus variegatus* (not of Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 26, 1837—part, Buenos Aires (spec. in Paris Museum examined).

*Anthus rufus* (not *Alauda rufa* Gmelin) (?) Burmeister, Journ. Orn., 8, p. 252, 1860—Paraná and Mendoza; (?) idem, Reise La Plata Staaten, 2, p. 474, 1861—Mendoza, Paraná, and Montevideo; Durnford, Ibis, 1876, p. 158—Buenos Aires (in part).

*Anthus correndera chilensis* (not *Corydalla chilensis* Lesson) Pereyra, El Hornero, 4, p. 33, 1927—San Rafael, Mendoza.

*Range*.—Northern half of Argentina, south to the Chubut River; Uruguay; southern Brazil, from Rio Grande do Sul north to São Paulo (Iguapé, São Sebastião).<sup>1</sup>

19: Argentina (Concepción, Tucumán, 19).

### ***Anthus antarcticus* Cabanis.<sup>2</sup> SOUTH GEORGIAN PIPIT.**

*Anthus antarcticus* Cabanis, Journ. Orn., 32, p. 254, 1884—South Georgia (type in Berlin Museum); Sharpe, Cat. Bds. Brit. Mus., 10, p. 604, 1885—South Georgia; Pagenstecher, Jahrb. Wiss. Anst. Hamburg, 2, p. 10, pl., figs. 1, 2 (adult and egg), 1885—South Georgia (crit., nest and eggs); Lönnberg, Vetensk. Akad. Handl., 40, No. 5, p. 54, 1906—Moraine Fjord and West Fjord, Cumberland Bay (habits); Murphy, El Hornero, 3, p. 56, 1923—South Georgia (habits); Bennett, Ibis, 1926, p. 332—South Georgia.

*Range*.—Island of South Georgia.

### ***Anthus nattereri* Sclater.<sup>3</sup> NATTERER'S PIPIT.**

<sup>1</sup> Specimens from southern Brazil are identical with an Argentinean series. An adult female from Chacabuco, Neuquen, taken on the nest with three eggs on November 14, 1907, also agrees in every respect with others in corresponding plumage from Buenos Aires. Birds from Concepción, Tucumán, all except two (that were shot in June) obtained in August, appear to be likewise inseparable. They are smaller, with shorter bills, and less fulvescent throughout, and have considerably less white on the lateral rectrices than *A. c. catamarcae*, though one or two individuals exhibit a certain tendency towards this form.

*Additional specimens examined*.—Argentina: Buenos Aires, 7; La Plata, 2 (females, Nov. 6 and 15, 1882. E. W. White); Barracas al Sud, 6; Chacabuco, Neuquen, 1 (breeding female with nest and eggs).—Brazil: São Lourenço, Rio Grande do Sul, 1; Rio Grande, Rio Grande do Sul, 1; São Sebastião, São Paulo, 5.

<sup>2</sup> *Anthus antarcticus* Cabanis, a very distinct species, differs from all other South American pipits by its gigantic size, heavy feet and bill, as well as by the rich warm buff under parts, coarsely marked with blackish all over, excepting the throat and a small area in the anal region.

Two specimens examined.

<sup>3</sup> *Anthus nattereri* Sclater, though resembling *A. correndera* in the excessively long, moderately curved hind claw, is a very distinct species, differing, as it does, by shorter wings, the absence of the buffy white interscapular stripe, and the peculiar shape of the rectrices. The upper parts are strongly fulvescent or ochraceous, more like *A. c. catamarcae*; the chest bright ochraceous, almost buff yellow, with dusky streaks, which are merely suggested on sides and flanks; the light areas on the lateral rectrices tinged with buffy or grayish buff. The tail feathers

*Anthus nattereri* Sclater, Ibis, (4), 2, p. 366, pl. 10, 1878—Pescaria, Rio Verde, and Itararé, São Paulo (type, from Rio Verde, in collection of P. L. Sclater, now in British Museum); Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 3, 1895—Paraguari, Paraguay; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—São Lourenço, Rio Grande do Sul (spec. examined); idem, Rev. Mus. Paul., 3, p. 133, 1899—Ypiranga, São Paulo; idem, l.c., 4, p. 202, 1900 (nest and eggs descr.); idem, Cat. Faun. Braz., 1, p. 331, 1907—Ypiranga and Itararé, São Paulo; Hellmayr, El Hornero, 2, p. 188, 1921—southeastern Brazil and Paraguay (crit.); Sztolerman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 187, 1926—Invernadinha, Paraná.

*Xanthocorys nattereri* Sharpe, Cat. Bds. Brit. Mus., 10, p. 619, 1885—Rio Verde, São Paulo (monog.).

*Anthus correndera* (not of Vieillot) Pelzeln, Orn. Bras., 2, p. 69, 1868—Rio Verde, Pescaria, and Itararé, São Paulo (spec. examined).

*Anthus correndera correndera* Bertoni, Rev. Chil. Hist. Nat., 17, p. 218, 1913—Paraguay, "Argentina (parte fronteriza)," and "Matto Grosso?" (crit.).

*Anthus correndera nattereri* Bertoni, Rev. Chil. Hist. Nat., 17, p. 219, 1913—Paraguari, Paraguay (ex Salvadori); idem, Faun. Parag., p. 60, 1914—Paraguari.

**Range.**—Southeastern Brazil, in states of São Paulo (Ypiranga, Rio Verde, Pescaria, Itararé), Paraná (Invernadinha, Monte Alegre), and Rio Grande do Sul (São Lourenço), and Paraguay (Paraguari).

### \**Anthus hellmayri hellmayri* Hartert.<sup>1</sup> HELLMAYR'S PIPIT.

are attenuated on the apical third and distinctly acuminate. The lower mandible is yellow, with mere traces of a dusky tip. Wing, 72–74½, (female) 69–70; tail, 63–65, (female) 58–65; bill, 12–13.

The characters of this peculiar species have been explained at length in "El Hornero," 2, p. 188.

**Material examined.**—Brazil, São Paulo: Itararé, 4; Ypanema, 1; Paraná, Fazenda de Monte Alegre, 1; São Lourenço, Rio Grande do Sul, 1.

<sup>1</sup> *Anthus hellmayri hellmayri* Hartert, while agreeing with *A. furcatus* in the strongly curved hind claw and the absence of the buffy white longitudinal dorsal stripe, differs by having the chest and sides narrowly streaked instead of spotted with dusky, and the outermost rectrix only marked with a cuneate grayish buffy stripe, there being very rarely (in two out of twenty specimens) a suggestion of a small apical spot of the same color on the penultimate pair. It is, no doubt, quite distinct specifically, and in general appearance more like *A. bogotensis shiptoni*, from which it may, however, be distinguished by smaller size, slenderer bill, heavily streaked sides, and more extensively striped pectoral zone, the markings being, besides, narrower and more elongated. J. Mogensen having obtained breeding specimens of both in December, 1924, at Las Pavas, *A. h. hellmayri* and *A. bogotensis shiptoni* clearly are specifically different.

*A. h. hellmayri* breeds in the Puna zone of Tucumán. In addition to the specimens in Field Museum, I have examined an adult male in very worn breeding plumage shot by the late G. A. Baer in February, 1903, at Lagunita (alt. 13,000 ft.). During the severe season this pipit descends to lower altitudes.

**Additional material examined.**—Tucumán: Lagunita, 1; Puerto Viejo, Norco, Vipos (alt. 4,000 ft.), 1; Rio Salí (alt. 1,800 ft.), 3.

*Anthus hellmayri* Hartert,<sup>1</sup> Nov. Zool., 16, p. 165, 1909—Tucumán=Rio Salí, Prov. Tucumán (type in Tring Museum); Dabbene, Bol. Soc. Physis, 1, p. 244, 1913—Argentina; Hartert, Nov. Zool., 26, p. 168, 1919—Tucumán.

*Anthus bogotensis* (not of Sclater) Lillo, Anal. Mus. Nac. Hist. Nat. Buenos Aires, 8, p. 173, 1902—Agua de la Tipa (alt. 880 meters), Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Agua de la Tipa; Dabbene, Anal. Mus. Nac. Hist. Nat. Buenos Aires, 18, p. 367, 1910—Agua de la Tipa (ex Lillo).

*Anthus correndera* (not of Vieillot) Baer, Ornith., 12, p. 214, 1904—Lagunita, Tucumán (spec. in Berlepsch Collection examined).

*Anthus hellmayri hellmayri* Hellmayr, El Hornero, 2, p. 189, 1921—Norco, Vipos, Rio Salí, and Lagunita, Tucumán (monog.).

*Range*.—Northwestern Argentina, in Province of Tucumán (Lagunita, Las Pavas, Norco, Vipos, Rio Salí, Concepción, etc.); (?) Bolivia.

15: Argentina, Tucumán (Concepción, 13; Las Pavas, 2).

**\**Anthus hellmayri dabbenei* Hellmayr.<sup>2</sup> DABBENE'S PIPIT.**

*Anthus hellmayri dabbenei* Hellmayr, El Hornero, 2, p. 191, 1921—Rio Traful, Neuquen, western Argentina (type in Senckenbergian Natural History Museum, Frankfurt); Giacomelli, l.c., 3, p. 67, 1923—La Rioja; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 43, 1932—Rio Lolen (Lonquimai Valley), Cautin, Chile, and Valle del Lago Blanco, western Chubut (crit.).

*Range*.—Breeds in western Chubut (Valle del Lago Blanco), western Neuquen (Rio Traful) (and doubtless other parts of western Argentina), and in the adjacent section of Chile (Lonquimai Valley, Cautin); winters in the provinces of Santa Fé (Las Rosas), La Rioja, and Tucumán (Concepción).

<sup>1</sup> Although the Brazilian form, "*Anthus chii*" auct., was considered the same, Hartert's diagnosis was exclusively based on three examples from the vicinity of Tucumán City.

<sup>2</sup> *Anthus hellmayri dabbenei* Hellmayr: Similar to *A. h. hellmayri*, but light-colored apical area on lateral rectrices nearly pure white, at best with a faint buffy tinge. In opposition to what obtains in the typical form, the penultimate rectrix always shows a distinct white apical spot. Wing, 76–77, (female) 70–76; tail, 58–64; bill, 10–11.

Breeding adults of this form we have seen from western Chubut (Valle del Lago Blanco, Nov. 6, 1900) and Neuquen (Rio Traful, Dec. 12, 1907), and a full-grown young bird was obtained by C. C. Sanborn on February 11, 1924, at Rio Lolen, Lonquimai Valley, in the Chilean Province of Cautin. In winter, this pipit migrates northward and hibernates in the plains of Tucumán, where numerous specimens have been collected at Concepción in May, June, and August. A male shot by Robin Kemp on October 18, 1916, at Las Rosas, Santa Fé, probably was on migration.

*Additional specimens examined*.—Argentina: Valle del Lago Blanco, Chubut, 1; Rio Traful, Neuquen, 1; Concepción, Tucumán, 1.

5: Argentina (Las Rosas, Santa Fé, 1; Concepción, 3); Chile (Rio Lolen, Lonquimai Valley, Cautin, 1).

**\**Anthus hellmayri brasiliianus* Hellmayr.<sup>1</sup> BRAZILIAN PIPIT.**

*Anthus hellmayri brasiliianus* Hellmayr, El Hornero, 2, p. 190, 1921—Campos do Itatiaya, "Rio de Janeiro," Brazil (type in Munich Museum); Holt, Bull. Amer. Mus. N. H., 57, p. 315, 1928—Serra do Itatiaya.

*Anthus chii* (not of Vieillot) Burmeister, Syst. Uebers. Th. Bras., 3, p. 119, 1856—Brazil (good descr.); Scater, Ibis, 1878, p. 359—Curytiba, Paraná (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 608, 1885—Curytiba; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 116, 1899—São Lourenço, Rio Grande do Sul (spec. examined); idem, Rev. Mus. Paul., 3, p. 132, 1899—Ypiranga, São Paulo; idem, Cat. Faun. Braz., 1, p. 330, 1907—Espírito Santo (Santa Leopoldina), "Rio de Janeiro" (Itatiaya), São Paulo (Ypiranga), and "Buenos Aires"; Miranda Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 13, p. 184, 1906—Morro dos Carneiros and Retiro do Ramos, Itatiaya; Lüderwaldt, Zool. Jahrb. (Syst.), 27, p. 355, 1909—Itatiaya; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 367, 1910—part, Barracas al Sud, Buenos Aires.

*Anthus rufus* (?) (not *Alauda rufa* Gmelin) Pelzeln, Orn. Bras., 2, p. 69, 1868—Casa Pintada, Lanza, Campo Largo, and Curytiba, Paraná (spec. examined).

**Range.**—Southeastern Brazil, from Espírito Santo (Santa Leopoldina) and São Paulo (Serra do Itatiaya) south to Rio Grande do Sul; Uruguay; (?) Buenos Aires (Barracas al Sud).

1: Uruguay (Estancia El Corte, 15 km. north of San Carlos, Dept. Maldonado, 1).

**\**Anthus bogotensis bogotensis* Scater. BOGOTÁ PIPIT.**

*Anthus bogotensis* Scater, Proc. Zool. Soc. Lond., 23, p. 109, pl. 101, Aug., 1855—Santa Fé de Bogotá, Colombia (type in collection of P. L. Scater, now in British Museum); idem, l.c., 26, p. 550, 1858—near Riobamba, Ecuador; idem, Cat. Coll. Amer. Bds., p. 24, 1862—Bogotá and Titiacun; Baird, Rev. Amer. Bds., 1, p. 157, 1864—Ecuador (crit.); Scater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—upper Páramo region, Mérida, Venezuela; Wyatt, Ibis, 1871, p. 322—Páramos of eastern Andes [=Pamplona], Colombia; Scater, Ibis, 1878, p. 358—part, Ecuador (Titiacun, Quito), Colombia (Bogotá, Páramo de Pamplona), and Venezuela (Andes of Mérida); Sharpe, Cat. Bds. Brit. Mus., 10, p. 603, 1885—

<sup>1</sup> *Anthus hellmayri brasiliianus* Hellmayr: Much like *A. h. hellmayri*, especially in the grayish buffy color of the tail markings, but smaller; the upper parts decidedly buffy brownish, less grayish; the lower parts more evenly washed with buffy, not whitish on the abdomen; the penultimate rectrix always with a grayish buffy apical spot. Wing, 72–75, (female) 66–71; tail, 54–62; bill, 11–12.

**Additional material examined.**—São Paulo: Itatiaya, 2; Ypiranga, 1; Itararé, 1.—Paraná: Casa Pintada, 1; Lanza, 1; Curytiba, 3; Fazenda Monte Alegre, 1.—Rio Grande do Sul: São Lourenço, 2; Camaquã, 1.

part, Venezuela (Mérida), Colombia (Páramo de Pamplona, Bogotá, Pasto), and Ecuador (Titiacun, Sical); Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 285—Cechce, Ecuador; idem, l.c., 1885—p. 74—San Rafael and Chimborazo, Ecuador; Hartert, Nov. Zool., 5, p. 479, 1898—Cayambe, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 7, 1899—Chaupi (Illiniza), Ecuador; Goodfellow, Ibis, 1901, p. 313—Valle de Viciosa, Ecuador; Rhoads, Auk, 29, p. 144, 1912—Páramo of Pichincha, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 554, 1917—Subia and Choachi, eastern Andes of Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—Pichincha, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 604, 1926—Cerro Huamani, Antisana, Chimborazo, Taraguacocha, and Bestion, Ecuador.

*Anthus bogotensis bogotensis* Hellmayr, El Hornero, 2, p. 192, 1921—part, Venezuela (Sierra of Mérida), Colombia, and Ecuador (crit.).

*Range*.—Páramo zone of extreme western Venezuela (Sierra of Mérida), eastern Andes of Colombia, and Ecuador.<sup>1</sup>

3: Venezuela (Têta de Niquitao, Trujillo, 2; Páramo de Tamá, Tachira, 1).

**\**Anthus bogotensis immaculatus* Cory.<sup>2</sup> UNSTREAKED PIPIT.**

*Anthus bogotensis immaculatus* Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 345, 1916—mountains east of Balsas, Dept. Amazonas, Peru (type in Field Museum); Chapman, Bull. U. S. Nat. Mus., 117, p. 108, 1921—La Raya, Puno, and Junín, Peru (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 412, 1930—mountains above Huánuco, Peru (crit.).

*Anthus rufescens* (not of Temminck, 1820) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 27, 1837—Yungas, Bolivia (type in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 226, 1838—Mount Biscachal, near Carcuata, Dept. La Paz, Bolivia.

<sup>1</sup> Birds from western Venezuela agree with "Bogotá" skins, and an Ecuadorian series does not differ either.

*Additional material examined*.—Venezuela, Mérida: Culata, 2.—Colombia: "Bogotá," 5.—Ecuador: Cechce, 1; "Govinda," 1; "Jima," 4; "Quito," 2.

<sup>2</sup> *Anthus bogotensis immaculatus* Cory: Exceedingly similar to *A. b. bogotensis*, but perhaps distinguishable by having the flanks less streaked with dusky or even wholly unstreaked, and by the broader as well as more deeply rufescent inner margin to the remiges.

I have not enough material to pass a definite judgment on the merits of this form. While the type and an adult female from the Cuzco region have the sides practically unstreaked, and one of our two males from the Huánuco Mountains as well as an adult from Biscachal (near Carcuata), Bolivia, shows only a few scattered streaks on the lower flanks, another male from near Huánuco very closely approaches birds from more northern localities, notably one from Ecuador. The broader, deeper rufescent quill-lining may be a more constant feature of *A. b. immaculatus*, but again several Ecuadorian skins are barely separable on this score. For the present I must look upon *immaculatus* as a rather questionable race.

*Additional specimens examined*.—Peru: Lauramarca, Cuzco, 1.—Bolivia, Dept. La Paz: Biscachal, near Carcuata, 1 (type of *A. rufescens* Lafresnaye and d'Orbigny); Iquico, Illimani, 2 (juv.).

*Anthus bogotensis* (not of Sclater) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 508—Maraynioc, Junín, Peru; Sclater, Ibis, 1878, p. 357—part, Peru (Maraynioc, Junín) and Bolivia (Biscachal); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 593—Mount Biscachal, near Carcuata, Bolivia (ex d'Orbigny); Taczanowski, l.c., 1880, p. 191—Cutervo, Peru; idem, Orn. Pér., 1, p. 457, 1884—Peru (Maraynioc and near Cutervo); Sharpe, Cat. Bds. Brit. Mus., 10, p. 603, 1885—part, Peru (Junín) and Bolivia; Salvin, Nov. Zool., 2, p. 3, 1895—Cajamarca and Huamachuco, Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 330—Maraynioc (crit.).

*Anthus bogotensis bogotensis* Hellmayr, El Hornero, 2, p. 192, 1921—part, Peru (Lauramarca) and Bolivia (Iquico and Carcuata, Yungas of La Paz); idem, Nov. Zool., 30, p. 225, 1923—Yungas, Bolivia (crit.).

*Range*.—Páramo zone of Peru, from depts. of Amazonas and Cajamarca southwards, and western Bolivia (Dept. La Paz).<sup>1</sup>

3: Peru (mountains east of Balsas, 1; mountains above Huánuco, 2).

\**Anthus bogotensis shiptoni* (Chubb).<sup>2</sup> SHIPTON'S PIPIT.

*Notiocorys bogotensis shiptoni* Chubb, El Hornero, 3, No. 1, pp. 34, 35, pl. 1, fig. 3, Feb., 1923—Aconquija (alt. 13,000 ft.), Tucumán (type in British Museum).

*Anthus bogotensis* subsp. nov. Hellmayr, El Hornero, 2, p. 193, 1921—Aconquija (crit.).

*Range*.—Puna zone of northwestern Argentina, in Province of Tucumán (Aconquija, Las Pavas).

11: Argentina (Aconquija, 6; Las Pavas, 5).

Family BOMBYCILLIDAE. Waxwings

Genus BOMBYCILLA Vieillot

*Bombycilla* Vieillot, Hist. Nat. Amér. Sept., 1, "1807," p. 88, pub. 1808—type, by monotypy, *Bombycilla cedrorum* Vieillot.

*Bombycivora* Temminck, Hist. Nat. Fig. Gall., 2, p. 249, footnote, 1813—species, *B. garrula* and *B. cedrorum*; idem, Man. d'Orn., p. 76, 1815.

<sup>1</sup> An additional race, based on a single specimen from Oconeque, Dept. Puno, Peru, has recently been described as *Anthus bogotensis pallidus* by Carriker (Proc. Acad. Nat. Sci. Phila., 85, p. 34, 1933).

<sup>2</sup> *Anthus bogotensis shiptoni* (Chubb): Similar to *A. b. immaculatus* in absence or reduction of dusky streaks on the flanks; but considerably paler below, the throat, middle of breast, and abdomen decidedly whitish, the chest and flanks paler buffy, and the dusky pectoral streaks smaller as well as less numerous; the rufescent inner margin to the remiges obsolete, even more so than in *A. b. bogotensis*. Wing, 81–85, (female) 78–82; tail, 59–65; bill, 11–12.

*Additional material examined*.—Tucumán: Aconquija, 5.



*Bombyciphora* Meyer, Besch. Vög. Liv.- und Esthlands, p. 104, 1815—type, by monotypy, *Bombyciphora poliocoelia* Meyer = *Ampelis garrulus* Linnaeus.

**\**Bombycilla garrula pallidiceps* Reichenow. BOHEMIAN WAXWING.**

*Bombycilla garrula pallidiceps* Reichenow, Orn. Monatsber., 16, p. 191, 1908—Shesly River, northern British Columbia (type in Berlin Museum); Oberholser, Auk, 36, p. 333, 1917—North America (crit.).

*Ampelis garrulus* (not *Lanius garrulus* Linnaeus) Sharpe, Cat. Bds. Brit. Mus., 10, p. 212, 1885—part, Nearctic region; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 105, 1904—part, American references and localities (monog., full bibliog.).

*Range*.—Northern North America, from western Alaska to northern Mackenzie and northeastern Manitoba south to southern British Columbia and southern Alberta; in winter east to Nova Scotia and south irregularly to Pennsylvania, Ohio, Michigan, Indiana, Illinois, Kansas, Colorado, California, and Arizona.

22: Canada (Red Deer, Alberta, 1; Okanagan Landing, British Columbia, 3); Montana (Townsend, 1); Colorado (El Jerbel, Eagle County, 3); Nebraska (Gresham, York County, 1); Minnesota (Hewitt, 1; Minneapolis, 5); Wisconsin (Beaver Dam, 2); Illinois (Waukegan, 3); Indiana (Kouts, 1); New York (Mexico, 1).

**\**Bombycilla cedrorum* Vieillot. CEDAR WAXWING.**

*Bombycilla cedrorum* Vieillot, Hist. Nat. Amér. Sept., 1, "1807," p. 88, pl. 57, pub. 1808—"en Amérique depuis le Canada jusqu' au Mexique, et même . . . à Caienne" (errore).

*Ampelis americana* Wilson, Amer. Orn., 1, p. 107, pl. 7, fig. 1, 1808 (later than Sept. 1)—Pennsylvania (type in Peale's Museum, probably lost).

*Bombyciphora xanthocoelia* Meyer, Besch. Vög. Liv.- und Esthl., p. 105 (in text), 1815—North America.

*Ampelis pinetorum* Meyer, Besch. Vög. Liv.- und Esthl., p. 105 (in text), 1815 (erroneous quotation of *B. cedrorum* Vieillot).

*Bombycilla carolinensis* Stephens, in Shaw, Gen. Zool., 10, (2), p. 422, 1817—Carolina to Mexico.

*Ampelis cedrorum* Sharpe, Cat. Bds. Brit. Mus., 10, p. 215, 1885 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 109, 1904 (monog., full bibliog.).

*Range*.—North America, from central British Columbia, Alberta, and Manitoba, northern Ontario, southern Quebec, and Cape Breton Island south to northwestern California, northern New Mexico, Kansas, northern Arkansas, North Carolina, and northern Georgia;

wintering throughout the United States and southward to Cuba, Mexico, Lower California, and Panama; accidental in the Bahamas, Bermudas, Jamaica, and the British Isles.

73: Maine (Upton, 3); Massachusetts (Duxbury, 2; Brookline, 1); New York (Peterboro, 3; Auburn, 1); New Jersey (Englewood, 1); Florida (Santa Rosa, 6; Mary Esther, 4; Key West, 1; Nassau County, 4; Amelia Island, 4); Mississippi (Holly Springs, 1); California (San José, 1; Corona, 1); Oregon (Salem, 1); Canada (Okanagan Landing, British Columbia, 1; Hastings Lake, Alberta, 1); Wisconsin (Beaver Dam, 13; Milton, 1); Illinois (Joliet, 3; Mound City, 1; Lake Forest, 2; South Chicago, 2; Henry, 1; Momence, 1); Bahama Islands (Berry Islands, 1); West Indies (Little Cayman, 1); Mexico (Iguala, Guerrero, 3; Mexico City, 2; Jalapa, 1); Guatemala (Volcan Tajumulco, San Marcos, 3); Nicaragua (San Rafael del Norte, 2).

## Family PTILOGONATIDAE. Silky Flycatchers

### Genus PTILOGONYNS Swainson

*Ptilogonys* Swainson, "Cat. Exhib. called Modern Mexico, App., p. 4, 1824"<sup>1</sup>—type, by monotypy, *Ptilogonys cinereus* Swainson; idem, Nat. Hist. Class., Bds., 2, p. 224, 1837.

*Ptilogonys* Swainson, Phil. Mag., (n.s.), 1, p. 368, May, 1827—type, by monotypy, *Ptilogonys cinereus* Swainson.

*Ptilogonatus* Swainson, Zool. Journ., 3, No. 10, p. 164, Sept., 1827—type, by orig. desig., *P. cinereus* Swainson.

*Sphenotelus* Baird, Rev. Amer. Bds., 1, p. 412, 1866—type, by orig. desig., *Ptilogonys caudatus* Cabanis.

### \**Ptilogonys cinereus cinereus* Swainson. MEXICAN PTILOGONYNS.

*Ptilogonys cinereus* Swainson, "Cat. Exhib. called Modern Mexico, App., p. 4, 1824"<sup>1</sup>—Mexico (type in Bullock Collection); Baird, Rev. Amer. Bds., 1, p. 412, 1866—part, Mexico (Sierra de Colima; Orizaba and Cordova, Vera Cruz); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—alpine region of Vera Cruz; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 217, 1883—part, Mexico; Sharpe, Cat. Bds. Brit. Mus., 10, p. 222, 1883—part, Mexico; Chapman, Bull. Amer. Mus. N. H., 10, p. 26, 1898—Jalapa (habits).

*Ptilogonys cinereus* Swainson, Phil. Mag., (n.s.), 1, p. 368, May, 1827—tableland of Mexico, Real del Monte; idem, Zool. Illust., (2), 2, pl. 62

<sup>1</sup> I have not been able to consult this scarce publication. Sherborn (Ind. Anim., 2nd sect., p. XXXIV, 1922) states that not one of the various copies seen by him contains the appendix, in which Swainson is supposed to have first described the Mexican *Ptilogonys*, and quotes the spelling "*Ptilogonys*" from Nat. Hist. Class. Bds., 2, p. 224, 1837. I am consequently in doubt as to the correct orthography of the generic name.

(=female), 1831—Mexico; idem, l.c., (2), 3, pl. 102 (= male), 1833—Real del Monte, Mexico; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 139, 1886—Teziutlan, Puebla, and Jalapa, Vera Cruz.

*Hypothymis chrysorrhoea* (Lichtenstein MS.) Temminck, Nouv. Rec. Pl. Col., livr. 76, pl. 452, 1828—Mexique (type in the Leiden Museum).<sup>1</sup>

*Ptilogonys cinereus cinereus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 115, 1904—part, central and southern Mexico (monog., full bibliog.).

**Range.**—Subtropical and Temperate zones of central and southern sections of Mexico, in states of Durango, Zacatecas, Guanajuato, Hidalgo, Puebla, Mexico, Vera Cruz, Oaxaca, Colima, Jalisco, and Morelos.<sup>2</sup>

4: Mexico (Jalapa, 1; Mexico City, 1; unspecified, 2).

**\*Ptilogonys cinereus molybdophanes** Ridgway. GUATEMALAN PTILOGONYS.

*Ptilogonys cinereus molybdophanes* Ridgway, Man. N. Am. Bds., p. 464 (footnote 1), 1887—Guatemala (type in U. S. National Museum).

*Ptilogonys cinereus molybdophanes* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 117, 1904—Guatemala (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 123, 1907—above Tecpam and road from Lake Atitlan to Tecpam, Guatemala; Griscom, Bull. Amer. Mus. N. H., 64, p. 322, 1932—San Mateo, Guatemala City, and San Lucas, western Guatemala.

*Ptilogonys cinereus* (not of Swainson) Sclater and Salvin, Ibis, 1859, p. 13—Guatemala; idem, Ibis, 1860, p. 31—"Coban" and Volcan de Fuego, Guatemala; Baird, Rev. Amer. Bds., 1, p. 412, 1866—part, Dueñas, Guatemala; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 41, 1878—oak forests of Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 217, 1883—part, Guatemala (Volcan de Fuego, Dueñas, Volcan de Agua, Sumpango, Barranco Hondo, and above Totonicapam); Sharpe, Cat. Bds. Brit. Mus., 10, p. 222, 1885—part, Guatemala.

**Range.**—Subtropical and Temperate zones of western Guatemala.

11: Guatemala ("Coban, Alta Vera Paz," 1); Tecpam, Chimaltenango, 10).

**\*Ptilogonys caudatus** Cabanis. COSTA RICAN PTILOGONYS.

*Ptilogonys caudatus* Cabanis, Journ. Orn., 8, for Nov., 1860, p. 402, pub., May, 1861—Irazú, Costa Rica (type in Berlin Museum); Baird, Rev. Amer. Bds., 1, p. 413, 1866—"San José" and Rancho Redondo, Costa

<sup>1</sup>*Hypothymis mexicanus* Lichtenstein (Preis-Verz. Säug., Vög., etc., Mexico, p. 2, 1831; Journ. Orn., 11, p. 58, 1863), cited as a synonym by authors, is a nomen nudum without nomenclatorial standing.

<sup>2</sup>Since the above was written, a race from Chilpancingo, Guerrero, has been separated as *P. c. pallescens* by Griscom (Bull. Mus. Comp. Zool., 75, p. 398, 1934).

Rica; Sclater and Salvin, *Exot. Orn.*, p. 11, pl. 6, 1866—Costa Rica (Rancho Redondo, Volcan de Cartago); Lawrence, *Ann. Lyc. Nat. Hist. N. Y.*, 9, p. 97, 1868—"San José" and Volcan "Yrazei" [= Irazú], Costa Rica; Frantzius, *Journ. Orn.*, 17, p. 295, 1869—Volcan de Irazú (habits); Salvin, *Proc. Zool. Soc. Lond.*, 1870, p. 185—south slope of Volcan de Chiriquí, Panama; Boucard, *l.c.*, 1878, p. 53—Volcan de Irazú and Navarro, Costa Rica; Salvin and Godman, *Biol. Centr.-Amer., Aves*, 1, p. 219, 1883—Costa Rica and Panama (Volcan de Chiriquí); Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 224, 1885—Costa Rica and Panama; Zeledón, *Anal. Mus. Nac. Costa Rica*, 1, p. 108, 1887—Costa Rica (Volcan de Irazú, La Palma de San José, Rancho Redondo de San José); Bangs, *Proc. New Engl. Zool. Cl.*, 3, p. 58, 1902—Volcan de Chiriquí (alt. 10,000 to 11,000 ft.), Panama (habits); Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 118, 1904—Costa Rica and Chiriquí (monog.); Ferry, *Field Mus. Nat. Hist., Orn. Ser.*, 1, p. 273, 1910—Volcan de Turrialba, Costa Rica; Carriker, *Ann. Carnegie Mus.*, 6, p. 785, 1910—Costa Rica (high volcanoes, just below timberline).

*Range*.—Upper Subtropical and Temperate zones of Costa Rica and extreme western Panama (Volcan de Chiriquí).<sup>1</sup>

10: Costa Rica (Volcan de Irazú, 1; Volcan de Turrialba, 8); Panama (Chiriquí, 1).

### Genus PHAINOPEPLA Baird

*Phainopepla* (Sclater MS.) Baird, *Rep. Expl. Surv. R. R. Pac.*, 9, p. 923, 1858—type, by orig. desig., *Ptilogonys nitens* Swainson; Sclater, *Proc. Zool. Soc. Lond.*, 26, "1858," p. 543, pub. Jan. to May, 1859—same type.

*Phaenopepla* Coues, *Ibis*, (n.s.), 1, p. 163, 1865—emendation.

### *Phainopepla nitens nitens* (Swainson). MEXICAN PHAINOPEPLA.

*Ptilogonys nitens* Swainson, *Anim. Menag.*, p. 285, Dec. 31, 1837—Mexico (type in coll. of W. Swainson, now in University Museum, Cambridge, England).

*Lepturus galeatus* Lesson, *Rev. Zool.*, 2, p. 42, 1839—"Mexico republicana" (type in coll. of Dr. Abeillé, Bordeaux).

*Cichlopsis nitens* Baird, *Rep. Expl. Surv. R. R. Pac.*, 9, p. 320, 1858—part, Coahuila, Mexico.

*Phainopepla nitens* Sclater, *Proc. Zool. Soc. Lond.*, 1864, p. 173—Mexico City; Dugès, *La Nature*, 1, p. 141, 1868—Guanajuato; Salvin and Godman, *Biol. Centr.-Amer., Aves*, 1, p. 220, 1883—part, Mexico (Coahuila, Guanajuato, valley of Mexico, Orizaba, Cimapan, Mirador); Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 220, 1885—part, central Mexico; Ferrari-Perez, *Proc. U. S. Nat. Mus.*, 9, p. 139, 1886—Rancho del Aguacate

<sup>1</sup> A single specimen from the Volcan de Chiriquí appears to agree with a Costa Rican series.

and Huehuetlan, Puebla; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 120, 1904—part, Mexican plateau and references to localities in southern Mexico; Miller, Bull. Amer. Mus. N. H., 22, p. 178, 1906—Rosario, Las Bocas, Matalotes, and Rancho Baillon, northwestern Durango (crit., meas.).

*Phaenopepla nitens* Baird, Rev. Amer. Bds., 1, p. 416, 1866—part, Mexico (Mirador); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—valley of Orizaba, and Tehuantepec, Puebla.

**Range.**—Central and southern Mexico, in states of Coahuila, San Luis Potosi, Durango, Guanajuato, Mexico, Puebla, and Vera Cruz.

**\*Phainopepla nitens lepida van Tyne.<sup>1</sup> NORTHERN PHAINOPEPLA.**

*Phainopepla nitens lepida* van Tyne, Occas. Pap. Bost. Soc. N. H., 5, p. 149, 1925—Riverside, California (type in Museum of Comparative Zoology, Cambridge, Mass.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 191, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 279, 1931—Saric, Obregón, Tésia, Chinobampo, El Alamo, about ten miles west of Magdalena, fifteen miles southwest of Nogales, and Guaymas, Sonora.

*Cichlopsis nitens* (not *Ptilogonys nitens* Swainson) Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 320, 1858—part, California, New Mexico, and Colorado Delta (crit.).

*Phainopepla nitens* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 220, 1883—part, Texas, New Mexico, Arizona, Lower and southern California; Sharpe, Cat. Bds. Brit. Mus., 10, p. 220, 1885—part, southern United States; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 120, 1904—part, southwestern United States (monog.).

*Phaenopepla nitens* Baird, Rev. Amer. Bds., 1, p. 416, 1866—part, North American localities (crit.).

**Range.**—Southwestern United States, from central California, southern Utah, and central western Texas southwards to Cape San Lucas in Lower California and into extreme northwestern Mexico (Sonora and Chihuahua); casual in central Nevada and northern California.

46: Arizona (Phoenix, 7; Gila County, 1; Tucson, 1; Fairbank, 1; Fort Lowell, 2; Calabasas, 16); California (Oroville, Butte County, 2; Amador County, 2; Newcastle, 3; Corona, 2; Claremont, 1; New River, 1; Paicines, 1; near Plymouth, 1); Mexico (La Paz, Lower California, 3; Cerro Blanco, Sonora, 1; Bastillos, Chihuahua, 1).

<sup>1</sup> *Phainopepla nitens lepida* van Tyne: Similar to *P. n. nitens*, but decidedly smaller. Wing, 88–96, (female) 87–95; tail, 86–98, (female) 84–93.

## Genus PHAINOPTILA Salvín

*Phainoptila* Salvín, Proc. Zool. Soc. Lond., 1877, p. 367—type, by orig. desig.,  
*Phainoptila melanozantha* Salvín.

**\*Phainoptila melanozantha melanozantha Salvín. SALVIN'S  
 PHAINOPTILA.**

*Phainoptila melanozantha* Salvín, Proc. Zool. Soc. Lond., 1877, p. 367—Costa Rica [= San Francisco] (type in Salvín-Godman Collection, now in British Museum); Rowley, Orn. Misc., 2, Part 7, p. 439, pl. 79, 1877—Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 53—Navárrro and Rancho Redondo, Costa Rica; Salvín and Godman, Biol. Centr.-Amer., Aves, 1, p. 219, pl. 14, 1883—Costa Rica (San Francisco, Irazú; Navárrro, Rancho Redondo); Sharpe, Cat. Bds. Brit. Mus., 10, p. 219, 1885—Costa Rica (Irazú); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—La Palma de San José and Rancho Redondo de San José, Costa Rica; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Chiriquí; Bangs, Proc. New Engl. Zool. Cl., 3, p. 58, 1902—Boquete and Volcan de Chiriquí, Panama; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 124, 1904—highlands of Costa Rica and Chiriquí (monog.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 273, 1910—Volcan de Turrialba, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 786, 1910—Volcan de Turrialba, San Juan de Irazú, La Estrella de Cartago, Burgos de Irazú, Escazú, Azahar de Cartago, Volcan de Irazú, Ujurrás de Térraba, and La Honduras, Costa Rica (habits).

*Range*.—Highlands of Costa Rica and extreme western Panama (Volcan de Chiriquí).

10: Costa Rica (Volcan de Turrialba, 7; Volcan de Irazú, 3).

**Phainoptila melanozantha minor Griscom.<sup>1</sup> LESSER**

**PHAINOPTILA.**

*Phainoptila melanozantha minor* Griscom, Amer. Mus. Nov., 141, p. 8, 1924—Cerro Flores, eastern Chiriquí, Panama (type in the American Museum of Natural History, New York).

*Range*.—Highlands of western Panama (Cerro Flores, eastern Chiriquí).

<sup>1</sup> *Phainoptila melanozantha minor* Griscom: "Similar to *P. m. melanozantha*, but on average smaller; female with hindneck more extensively gray of a slightly darker shade; rump, upper tail coverts, and edgings to tail feathers slightly greener, less yellow. Wing, 94½–97, (female) 92–96; tail, 78–85, (female) 76–84; bill, 14–15." (Griscom, l.c.).

We are not acquainted with this race. Specimens from Chiriquí are obviously inseparable from typical Costa Rican birds.

## Family DULIDAE. Palm Chats

## Genus DULUS Vieillot

*Dulus* Vieillot, Anal. Nouv. Orn. Elém., p. 42, 1816—type, by orig. desig.,  
 “Tangara esclave” Buffon = *Tanagra dominica* Linnaeus.

**\**Dulus dominicus dominicus* (Linnaeus). PALM CHAT.**

*Tanagra dominica* Linnaeus, Syst. Nat., 12th ed., 1, p. 316, 1766—based on  
 “Le Tangara de S. Domingue” Brisson, Orn., 3, p. 37, pl. 2, fig. 4, and  
 “Tangara, de St. Domingue” Daubenton, Pl. Enl., pl. 156, fig. 2; Santo  
 Domingo.

*Tanagra mancipium* Hermann, Tab. Aff. Anim., p. 211, 1783—based on  
 “L’Esclave” Buffon, Hist. Nat. Ois. (éd. Impr. Roy.), 5, p. 21; Saint  
 Domingue.

*Turdus gujanensis* Gmelin, Syst. Nat., 1, (2), p. 809, 1789—based on “La  
 Grive de la Guyane” Buffon and Daubenton, Pl. Enl., pl. 398, fig. 1;  
 “Guiana,” errore.

*Dulus palmarum* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 10, p. 435, 1817—  
 new name for *Tanagra dominica* Linnaeus; Lafresnaye, Rev. Mag. Zool.,  
 (2), 3, p. 583, 1851 (habits, affinities).

*Dulus nuchalis* Swainson, Anim. Menag., p. 345, Dec. 31, 1837—“Brazil”  
 (type in coll. of Swainson, now in University Museum, Cambridge,  
 England); Sharpe, Cat. Bds. Brit. Mus., 10, p. 219, 1885—“said to be  
 from Brazil” (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 127,  
 1904 (ex Swainson); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 510 (in  
 text), 1928 (crit.; = albinistic specimen).

*Dulus dominicus* Strickland, Contrib. Orn., 1851, p. 103 (systematic position);  
 Baird, Rev. Amer. Bds., 1, p. 403, 1866—Haiti (Jeremie and Port-au-  
 Prince) and Santo Domingo; Cory, Bds. Haiti and San Dom., p. 51,  
 pl. 21, fig. 4, 1885—Santo Domingo (Samaná) and Haiti (Le Coup);  
 Sharpe, Cat. Bds. Brit. Mus., 10, p. 218, 1885—Santo Domingo (monog.);  
 Cory, Bds. W. Ind., p. 78, 1889—Haiti (monog.); Cherrie, Field Columb.  
 Mus., Orn. Ser., 1, p. 13, 1896—Santo Domingo (habits); Ridgway,  
 Bull. U. S. Nat. Mus., 50, Part 3, p. 126, 1904—Haiti (monog.); Verrill and  
 Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Santo Domingo  
 (habits); Peters, Bull. Mus. Comp. Zool., 61, p. 417, 1917—Monte Cristo,  
 Bulla, and Sosúa, Santo Domingo (habits); Bond, Proc. Acad. Nat. Sci.  
 Phila., 80, p. 509, 1928—part, Haiti (from sea level to 6,000 ft. alt., habits);  
 Danforth, Auk, 46, p. 372, 1929—Santo Domingo and Haina, Hispaniola;  
 Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 345, pl. 23, 1931—  
 island of Haiti (monog., full bibliog., habits, food, nest, and eggs); Wet-  
 more, Proc. U. S. Nat. Mus., 81, art. 2, p. 32, 1932—Petit Trou de Nippes,  
 Haiti.

**Range.**—Island of Haiti, Greater Antilles.

105: Santo Domingo (Santo Domingo, 37; Aguacate, 21; Hon-  
 duras, 6; San Cristobal, 5; Fuerte Resoli, 1; Catara, 11; Samaná, 7;  
 Puerto Plata, 4); Haiti (Kenscoff, 2; Diquini, 1; unspecified, 10).

**Dulus dominicus oviedo** Wetmore.<sup>1</sup> GONAVE PALM CHAT.

*Dulus dominicus oviedo* Wetmore, Proc. Biol. Soc. Wash., 42, p. 117, 1929—Pikmy [=Picmy], Gonave Island (type in U. S. National Museum); idem and Swales, Bull. U. S. Nat. Mus., 155, p. 351, 1931—Gonave Island (monog.).

*Dulus dominicus* (not *Tanagra dominica* Linnaeus) Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 509, 1928—part, Gonave Island.

*Range*.—Gonave Island, off Haiti, Greater Antilles.

## Family VIREONIDAE. Vireos

## Genus VIREO Vieillot

*Vireo* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 83, pub. 1808—type, by subs. desig. (Gray, List Gen. Bds., p. 33, 1840), *Vireo musicus* Vieillot = *Muscicapa noveboracensis* Gmelin = *Tanagra grisea* Boddaert.

*Vireosylva* Bonaparte, Geog. Comp. List Bds. Eur. North Amer., p. 26, 1838—type, by subs. desig. (Gray, List Gen. Bds., 2nd ed., p. 44, 1841), *Vireo olivaceus* auct. = *Vireo virescens* Vieillot.

*Phyllomanes* Cabanis, Arch. Naturg., 13, (1), p. 321, 1847—new name for *Vireosylva* Bonaparte.

*Vireosylva* Bonaparte, Consp. Gen. Av., 1, p. 329, 1850—emendation of *Vireosylva* Bonaparte.

*Lanivireo* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 329, 1858—type, by orig. desig., *Vireo flavifrons* Vieillot.

*Vireonella* Baird, Rev. Amer. Bds., 1, p. 369, 1866—type, by orig. desig., *Vireo gundlachii* Lembeye.

**\*Vireo atricapillus** Woodhouse. BLACK-CAPPED VIREO.

*Vireo atricapilla* Woodhouse, Proc. Acad. Nat. Sci. Phila., 6, p. 60, 1852—San Pedro River, 208 miles from San Antonio, on the road to El Paso del Norte, Texas (type in U. S. National Museum); idem, in Sitgreaves' Expl. Zuffi and Col. R., p. 75, pl. 1, 1853—San Pedro River.

*Vireo atricapillus* Cassin, Illust. Bds. Calif., etc., p. 153, pl. 24, 1854—Texas; Baird, Rev. Amer. Bds., 1, p. 353, 1866—southern border of Texas (crit.); Brewster, Bull. Nutt. Orn. Cl., 4, p. 99, 1879—Comal County, Texas (nest and eggs descr.); Coues, l.c., 4, p. 193, pl. 1, 1879—Comal County, Texas; Ragsdale, l.c., 5, p. 239, 1880—Red River, Texas; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 199, 1881—Texas and Mazatlan, Mexico; Gadow, Cat. Bds. Brit. Mus., 8, p. 300, 1883—Texas to Mexico; Goss, Auk, 2, p. 274, 1885—Comanche County, Kansas (nesting habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 181, 1904—Kansas to Texas and Mexico (monog.); Phillips, Auk, 28, p. 83, 1911—Santa Leonor,

<sup>1</sup> *Dulus dominicus oviedo* Wetmore: Similar to *D. d. dominicus*, but on average somewhat larger with heavier bill, and upper parts more grayish brown, especially rump and tail coverts less extensively washed with greenish. Wing, 90–92, (female) 88–94; tail, 72–80.



Tamaulipas; Lacey, l.c., p. 215, 1911—Kerrville, Texas; Smith, Auk, 33, p. 191, 1916—Kerr County, Texas.

**Range.**—Breeds from southwestern Kansas to central Texas, and winters probably in Mexico (Santa Leonor, Tamaulipas; Mazatlan, Sinaloa; Volcano of Toluca, Mexico). Accidental in Nebraska.

5: Texas (Kerrville, 4; Gainesville, 1).

**\*Vireo bairdi** Ridgway. BAIRD'S VIREO.

*Vireo bairdi* Ridgway, Proc. Biol. Soc. Wash., 3, p. 22, 1885—Cozumel Island (type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 8, p. 565, 1885—Cozumel (full descr.); Salvin, Ibis, 1888, p. 254—Cozumel; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 180, 1904—Cozumel (monog.); Griscom, Amer. Mus. Nov., 236, p. 11, 1926—Cozumel (crit., song).

**Range.**—Cozumel Island, Yucatan.

3: Cozumel Island.

**\*Vireo griseus griseus** (Boddaert).<sup>1</sup> WHITE-EYED VIREO.

*Tanagra grisea* Boddaert, Tabl. Pl. Enl., p. 45, Dec., 1783—based on "Tanagra olive, de la Louisiane" Daubenton, Pl. Enl., pl. 714, fig. 1; Louisiana.

*Muscicapa noveboracensis* Gmelin, Syst. Nat., 1, (2), p. 947, 1789—based on "Green Fly-catcher" Pennant, Arct. Zool., 2, p. 389; New York.

*Vireo musicus* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 83, pl. 52, 1808—North America (type in coll. of P. L. Vieillot).

*Muscicapa cantatrix* Wilson, Amer. Orn., 2, p. 166, pl. 18, fig. 6, 1810—Pennsylvania (type in Peale's Museum, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 344, 1930).

*Vireo noveboracensis* Gundlach, Journ. Orn., 3, p. 469, 1855—Cuba (one record); Sclater and Salvin, Ibis, 1860, p. 274—Coban, Guatemala (one spec.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 200, 1881—part, United States, Mexico, Guatemala (Coban), and Cuba; Cory, Auk, 4, p. 181, 1887—St. Andrews.

*Vireo noveboracensis noveboracensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 183, 1904 (monog., full bibliog.); Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Yucatan; idem, Bull. Amer. Mus. N. H., 64, p. 318, 1932—Coban, Guatemala.

*Vireo griseus griseus* Todd and Worthington, Ann. Carnegie Mus., 7, pp. 428, 458, 1911—Staniard Creek, Andros Island, Bahamas; Phillips, Auk, 28,

<sup>1</sup> Messrs. Worthington and Todd (Wilson Bull., 38, pp. 222-223, 1926), after studying a series of breeding birds from southern Florida and Key West, came to the conclusion that they were inseparable from topotypical Louisiana specimens. They consequently consider *V. g. maynardi* to be synonymous with *V. g. griseus*, the range of which would seem to extend along the Atlantic coast as far north as South Carolina (Summerville), whereas the name *V. g. noveboracensis* (Gmelin) is revived for the form of the northern United States, which differs in brighter upper parts and deeper as well as more extensive greenish yellow sides and flanks.

p. 83, 1911—San Fernando and Altamira, Tamaulipas; Peters, l.c., 30, p. 377, 1913—Xcopen and Camp Mengel, Quintana Roo; Todd, Ann. Carnegie Mus., 10, p. 256, 1916—Caleta Grande and Nueva Gerona, Isle of Pines; Barbour, Mem. Nutt. Orn. Cl., 6, p. 108, 1923—Cuba (accidental); Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz; idem, l.c., 68, p. 400, 1928—Chivelá, Oaxaca; Peters, l.c., 69, p. 460, 1929—Tela, Honduras (March).

*Range*.—Breeds chiefly in Austral zones from southeastern Nebraska, southern Wisconsin, Ohio, New York, and Massachusetts to central Texas and southern Florida; winters from Texas, Alabama, southern Georgia, Florida, and South Carolina south through eastern Mexico to eastern Guatemala (Coban; one record) and Honduras (Tela; one record); casual in Michigan, Vermont, Ontario, New Brunswick, Bahama Islands (Andros), Cuba, the Isle of Pines, and St. Andrews.

96: Massachusetts (Maldon, 1; Ipswich, 1); New York (Shelter Island, 1); District of Columbia (Washington, 1); North Carolina (Raleigh, 3); Tennessee (Waverly, 1); Florida (Puntarasa, 5; Seven Oaks, 1; Banana River, 1; Town Point, Santa Rosa Island, 2; Mary Esther, 7; East Pass, 4; Rosewood, 2; Enterprise, 2; West Jupiter, 2; Merritt, 1; Gainesville, 1; Palm Beach, 1; Lake Worth, 1); Georgia (West End, 1); Mississippi (Vicksburg, 9; Holly Springs, 8); Louisiana (Buras, 1); Texas (Corpus Christi, 11; Fort Clark, 1; Fort Worth, 5); Arkansas (Winslow, 1; Cleburne, 1); Illinois (Henry, 2; Grand Chain, 7; Mound City, 1; Olive Branch, 6); Mexico (Cozumel Island, 1; Vera Cruz, 1); St. Andrews, 2.

**\*Vireo griseus maynardi Brewster. KEY WEST VIREO.**

*Vireo noveboracensis maynardi* Brewster, Auk, 4, p. 143, 1887—Key West, Florida (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 186, 1904 (monog.).

*Range*.—Florida Keys.<sup>1</sup>

18: Florida (Key West, 18).

**Vireo griseus bermudianus Bangs and Bradlee. BERMUDA VIREO.**

*Vireo bermudianus* Bangs and Bradlee, Auk, 18, p. 252, 1901—Hamilton, Bermuda (type in Museum of Comparative Zoology, Cambridge, Mass.).

<sup>1</sup> Birds from the west coast of Florida, north to Tarpon Springs, which are more or less intermediate between *griseus* and *maynardi*, have been referred to the latter form by Scott and Ridgway. Cf. Scott, Auk, 5, p. 187, 1888; idem, Auk, 7, pp. 15, 312, 1890. The fourth edition of the A. O. U. Check List (1931) restricts the range of *V. g. maynardi* to the Florida Keys. Cf., however, Worthington and Todd (Wilson Bull., 38, pp. 222–223, 1926), whose conclusions appear to be well founded.

*Vireo noveboracensis bermudianus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 185, 1904 (monog., full bibliog.).

*Vireo griseus bermudianus* Bradlee and Mowbray, Proc. Bost. Soc. N. H., 38, p. 350, 1931—Bermudas (habits).

*Range*.—Resident on the Bermuda Islands.

**\**Vireo griseus micrus* Nelson. SMALL WHITE-EYED VIREO.**

*Vireo noveboracensis micrus* Nelson, Auk, 16, p. 30, 1899—Victoria, Tamaulipas (type in U. S. National Museum); Mearns, Auk, 19, p. 87, 1902—southern Texas (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 186, 1904—Rio Grande Valley of Texas and northeastern Mexico (monog., full bibliog.).

*Vireo griseus micrus* Phillips, Auk, 28, p. 83, 1911—Matamoros, San Fernando, Guiaves, Rio Santa, Caballeros, Santa Leonor, Rio Martinez, Rio Cruz, and Altamira, Tamaulipas (crit.).

*Range*.—Rio Grande Valley, Texas, south to Tamaulipas, Nuevo Leon, and San Luis Potosi, eastern Mexico.

8: Texas (Ingram, 1; Harlingen, 2; Brownsville, 1); Mexico (Matamoros, 2; Tamaulipas, 2).

***Vireo griseus perquisitor* Nelson.<sup>1</sup> VERA CRUZ VIREO.**

*Vireo perquisitor* Nelson, Auk, 17, p. 267, 1900—Papantla, Vera Cruz (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 187, 1904—Papantla.

*Range*.—Tropical zone of northern Vera Cruz (Papantla), eastern Mexico.

**\**Vireo griseus crassirostris* (Bryant).<sup>2</sup> LARGE-BILLED VIREO,**

*Lanivireo crassirostris* Bryant, Proc. Bost. Soc. N. H., 7, p. 112, 1859—New Providence, Bahama Islands (cotypes in U. S. National Museum and in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs and Penard, Bull. Mus. Comp. Zool., 67, p. 206, 1925); Cory, Bds. Bahama Isl., p. 83, 1890—Bahamas.

<sup>1</sup> *Vireo griseus perquisitor* Nelson, known from a single specimen taken at Papantla in March, appears to be a dark-colored race, with strongly yellowish under parts, of the White-eyed Vireo.

<sup>2</sup> I cannot see in this "species" anything but a well-marked resident form of the North American bird with larger bill and more uniform under parts, since it is approached in certain characters by *V. g. maynardi*, of the Florida Keys.

I fully agree with Mr. Todd that subdivision of the Bahama birds is unwarranted, the larger percentage of the yellowish "phase" among the inhabitants of the more eastern islands being hardly of sufficient importance to maintain the distinction of *V. g. flavescens*. Specimens from the Cayman Islands (*alleni*) are pronounced by Mr. Bangs, who had ample material for comparison, to be identical with those from the Bahamas.

*Vireo alleni* Cory, Auk, 3, p. 500, 1886—Grand Cayman (type in coll. of C. B. Cory, now in Field Museum); idem, Auk, 6, p. 31, 1889—Little Cayman and Cayman Brac; idem, Bds. W. Ind., p. 75, 1889—Grand Cayman.

*Vireo crassirostris flavescens* Ridgway, Man. N. Amer. Bds., p. 476, 1887—Concepción Island, Cat Island, Green Cay, Rum Cay, and Eleuthera Island, Bahamas (type from Concepción Island in U. S. National Museum); idem, Auk, 8, pp. 336, 338, 339, 1891—Cat Island, Rum Cay, Green Cay, and Concepción Island; idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 191, 1904—eastern Bahamas (monog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Eleuthera, Green Cay, Long Island, Cat Island, Concepción Island, Rum Cay, Great Inagua.

*Vireo crassirostris* Baird, Rev. Amer. Bds., 1, p. 368, 1866—Bahamas (monog.); Cory, Auk, 3, p. 188, 1886—Bahamas (descr.); idem, Bds. W. Ind., p. 75, 1889—Bahamas; Northrop and Allen, Auk, 8, p. 70, 1891—Andros Island; Cory, Auk, 8, pp. 294, 295, 296, 297, 298, 350, 351, 1891—New Providence, Caicos Island, Inagua, Abacos, Berry Islands, Bimini Islands, Great Bahama, and Eleuthera; Ridgway, Auk, 8, pp. 334, 335, 336, 338, 1891—Abaco, New Providence, Eleuthera, Cat Island, and Green Cay; Cory, Auk, 9, pp. 48, 49, 1892—Mariguana and Inagua; Bangs, Auk, 17, p. 289, 1900—Nassau, New Providence (crit.); Bonhote, Ibis, 1903, p. 287—Nassau; Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Abaco, Eleuthera, New Providence, Highborn Cay, Andros, Green Cay, Pimlico Cay, Cat Island, and Great Inagua.

*Vireo crassirostris crassirostris* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 189, 1904—western Bahama Islands (monog.); Todd and Worthington, Ann. Carnegie Mus., 7, pp. 428, 458, 1911—New Providence, Great Inagua, and Andros (crit.); Bangs, Bull. Mus. Comp. Zool., 60, p. 314, 1916—Grand Cayman, Little Cayman, and Cayman Brac (crit.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 16, 1931—Grand Cayman.

*Vireo crassirostris alleni* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 192, 1904—Grand Cayman and Cayman Brac (monog.); Lowe, Ibis, 1909, p. 344—Grand Cayman (crit., song); idem, Ibis, 1911, p. 154—Cayman Islands.

*Range.*—Bahama Islands and Cayman Islands (Grand Cayman, Little Cayman, Cayman Brac), Greater Antilles.

171: Bahama Islands (Great Bahama, 9; Abaco, 11; Eleuthera, 33; Berry Islands, 6; Nassau, New Providence, 11; Andros, 18; Inagua, 38; Caicos, 8; Mariguana, 17; Bimini, 3); Cayman Islands (Cayman Brac, 11; Grand Cayman, 6).

**\**Vireo griseus approximans* Ridgway.<sup>1</sup> OLD PROVIDENCE VIREO.**

<sup>1</sup> *Vireo griseus approximans* Ridgway is extremely close to *V. g. crassirostris*, but perhaps distinguishable by its paler coloration and lighter bill.

*Vireo approximans* Ridgway, Proc. U. S. Nat. Mus., 7, p. 179, 1884—Old Providence Island (type in U. S. National Museum); Cory, Auk, 4, p. 180, 1887—Old Providence.

*Vireo crassirostris approximans* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 192, 1904—Old Providence (monog.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 16, 1931—Old Providence.

*Range.*—Old Providence Island, Caribbean Sea.

9: Old Providence Island, 9.

### ***Vireo griseus tortugae* Richmond.<sup>1</sup> TORTUGA VIREO.**

*Vireo crassirostris tortugae* Richmond, Smiths. Misc. Coll., 68, No. 7, p. 2, 1917—Tortuga Island, off the northwest coast of Haiti (type in U. S. National Museum); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 510, 1928—Tortuga (habits, nest, and eggs); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 352, 1931—Tortuga Island (crit.).

*Range.*—Tortuga (Tortue) Island, off the northwest coast of Hispaniola, Greater Antilles.

### **\**Vireo griseus gundlachii* Lembeye. GUNDLACH'S VIREO.**

*Vireo gundlachii*(i) Lembeye, Aves Isl. Cuba, p. 29, pl. 5, fig. 1, 1850—Cuba<sup>2</sup> (type presumably in the Havana Museum); Gundlach, Journ. Orn., 3, p. 468, 1855—Cuba; Thienemann, l.c., 5, p. 147, 1857—Cuba (nest and eggs); Baird, Rev. Amer. Bds., 1, p. 369, 1866—Fermina, western Cuba; Gundlach, Journ. Orn., 20, p. 404, 1872—Cuba (descr., habits, nest); Gadow, Cat. Bds. Brit. Mus., 8, p. 304, 1883—Cuba; Cory, Auk, 3, p. 188, 1886—Cuba; idem, Bds. W. Ind., p. 75, 1889—Cuba; Chapman, Bull. Amer. Mus. N. H., 4, p. 309, 1892—Trinidad, Cuba (crit., song); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 188, 1904—Cuba; Bangs and Zappey, Amer. Natur., 39, p. 209, 1905—Cayo Bonito, Isle of Pines (crit.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 107, 1923—Cuba (crit.).

*Vireo gundlachii gundlachii* Todd, Ann. Carnegie Mus., 10, p. 255, 1916—Caleta Grande and Nueva Gerona, Isle of Pines (crit.).

(?) *Vireo gundlachii orientalis* Todd, Ann. Carnegie Mus., 10, p. 256, 1910—Arroyo Hondo, "Los Caños," Guantánamo, eastern Cuba (type in Carnegie Museum); Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 32, 1932—Rio Gibara, Cuba (crit.).

<sup>1</sup> *Vireo griseus tortugae* Richmond: Nearest to *V. g. crassirostris*, but dorsal surface buffy brown rather than grayish; auriculars and sides of neck isabella color instead of yellowish olive; under parts decidedly tinged with buff. Dimensions about the same.

*Material examined.*—Tortuga Island, 5.

<sup>2</sup> Cienfuegos has been suggested as type locality by Todd (Ann. Carnegie Mus., 10, p. 256, in text, 1916).

*Range*.—Island of Cuba, including Isle of Pines, Greater Antilles.<sup>1</sup>

5: Cuba (Trinidad, 1; Yzaga, Province of Santa Clara, 1; unspecified, 3).

**\*Vireo griseus modestus** Sclater.<sup>2</sup> JAMAICAN VIREO.

*Vireo modestus* Sclater, Proc. Zool. Soc. Lond., 28, p. 462, 1860—Jamaica (type in coll. of P. L. Sclater, now in British Museum); idem, l.c., 1861, p. 72, pl. 14, fig. 1—Freeman's Hall and Mahogany Hall, Trelawny, Jamaica; idem, Cat. Coll. Amer. Bds., p. 43, 1862—Jamaica; March, Proc. Acad. Nat. Sci. Phila., 1863, p. 294—Jamaica (nest and eggs); Baird, Rev. Amer. Bds., 1, p. 362, 1866—Jamaica (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 303, 1883—Jamaica; Cory, Auk, 3, p. 187, 1886—Jamaica (descr.); idem, Bds. W. Ind., p. 74, 1889—Jamaica; Scott, Auk, 10, p. 339, 1893—Jamaica; Field, Auk, 11, p. 127, 1894—Port Henderson, Jamaica (nest); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 200, 1904—Jamaica (monog.); Danforth, Auk, 45, p. 489, 1928—Lumsden, Jacksontown, Duncan's Bay, Mandeville, and Black River, Jamaica.

*Vireo noveboracensis* (not *Muscicapa noveboracensis* Gmelin) Gosse, Bds. Jamaica, p. 192, 1847—Jamaica (habits, song).

*Range*.—Island of Jamaica, Greater Antilles.

9: Jamaica.

**\*Vireo griseus semiflavus** Salvin.<sup>3</sup> PETEN VIREO.

*Vireo semiflavus* Salvin, Proc. Zool. Soc. Lond., 1863, p. 188—Peten, eastern Guatemala (type in Salvin-Godman Collection, now in British Museum); idem, Ibis, 1866, p. 193—Peten.

*Vireo ochraceus semiflavus* Griscom, Bull. Amer. Mus. N. H., 64, p. 319, 1932—Caribbean lowlands from Yucatan to Nicaragua (crit.).

*Vireo ochraceus* (not of Salvin) Baird, Rev. Amer. Bds., 1, p. 366, 1866—part, eastern Guatemala (Sakluk, Peten) and Mérida, Yucatan (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 201, 1882—part,

<sup>1</sup> Mr. Todd separated the inhabitants of eastern Cuba as *V. g. orientalis*, on account of more grayish (less greenish) dorsal surface, paler yellow lores and postocular spot, and duller yellow under parts with more buffy suffusion and dark shading on the sides. Barbour claims that the large series from various parts of the island examined by him show the variation to be individual (dichromatic) rather than geographic, while Wetmore is inclined to recognize two races. We have not enough material to decide the question independently.

In spite of its pronounced characters we have no hesitation in regarding *V. gundlachii* as a geographical representative of the White-eyed Vireo.

<sup>2</sup> *Vireo griseus modestus* Sclater, though well characterized by the absence of the bright yellow frontal and loreal streak and the duller, more greenish color of the sides, is clearly a geographic representative of the *griseus* group.

<sup>3</sup> *Vireo griseus semiflavus* Salvin: Similar to *V. g. ochraceus*, but slightly smaller (wing, 52–58, against 58–62) and under parts somewhat brighter, barita yellow rather than straw yellow; immature plumage much more grayish above.

*Material examined*.—Yucatan, 4; Ruatan Island, 3; Puerto Barrios, Guatemala, 1.

Yucatan (Mérida, Progreso), British Honduras (Corosa), and Guatemala (Sakluk, near Peten); Gadow, Cat. Bds. Brit. Mus., 8, p. 302, 1883 (part); Salvin, Ibis, 1888, p. 255—Holbox, Mugerres, and Ruatan Islands (crit.); Richmond, Proc. U. S. Nat. Mus., 16, p. 486, 1893—Greytown, Nicaragua; Chapman, Bull. Amer. Mus. N. H., 8, p. 278, 1896—Chichen Itza, Yucatan; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 193, 1904—part, Mexico, in states of Campeche and Yucatan, eastern Guatemala (Sakluk, Peten), British Honduras (Belize), and Nicaragua (Greytown); Cole, Bull. Mus. Comp. Zool., 50, p. 136, 1906—Chichen Itza, Yucatan (nest and eggs); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 124, 1907—part, Puerto Barrios, Guatemala; Peters, Auk, 30, p. 377, 1913—Xcopen, Quintana Roo; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Palmul and Xcaret, Yucatan.

*Range*.—Caribbean lowlands of southeastern Mexico, in states of Campeche (Campeche, Jaina), Quintana Roo (Xcopen), and Yucatan (Mérida, Progreso, La Vega, Chichen Itza, Palmul, Xcaret), including Holbox and Mugerres Islands; British Honduras (Corosal, Belize); Honduras (Ruatan Island); eastern Guatemala (Puerto Barrios; Sakluk, Peten); and eastern Nicaragua (Greytown).

1: Guatemala (Puerto Barrios, 1).

#### \**Vireo griseus ochraceus* Salvin. OCHRACEOUS VIREO.

*Vireo ochraceus* Salvin, Proc. Zool. Soc. Lond., 1863, p. 188—San José, Guatemala (type in Salvin-Godman Collection, now in the British Museum); idem, Ibis, 1866, p. 193—San José, Guatemala; Baird, Rev. Amer. Bds., 1, p. 366, 1866—part, San José, Guatemala; Lawrence, Mem. Bost. Soc. N. H., 2, p. 272, 1874—Mazatlan, Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 201, pl. 12, fig. 1, 1882—part, Mazatlan, Mexico, and San José, Guatemala; Gadow, Cat. Bds. Brit. Mus., 8, p. 302, 1883 (part); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 193, 1904—part, Mazatlan, Mexico, and western Guatemala (San José); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 124, 1907—part, San José, western Guatemala.

*Vireo ochraceus ochraceus* Griscom, Bull. Amer. Mus. N. H., 64, p. 319, 1932—San José and Ocos, Guatemala (crit.).

*Range*.—Pacific coast (mangrove swamps) of western Mexico (Mazatlan, Sinaloa) and Guatemala (Ocos, San José).

7: Guatemala (San José, Escuintla, 7).

#### *Vireo griseus pallens* Salvin.<sup>1</sup> PALE VIREO.

<sup>1</sup> *Vireo griseus pallens* Salvin, though differing from the two other Central American vireos in duller (above less greenish, below less yellowish) coloration, is so closely approached by the juvenile plumage of *V. g. semiflavus* that its pertinence as a geographical representative to the present group can hardly be doubted.

*Material examined*.—Costa Rica: Puntarenas, 1.

*Vireo pallens* Salvin, Proc. Zool. Soc. Lond., 1863, p. 188—Realejo, Nicaragua, and Puntarenas, Costa Rica (type, from Puntarenas, in Salvin-Godman Collection, now in British Museum); idem, Ibis, 1866, p. 193—Realejo; Baird, Rev. Amer. Bds., 1, p. 365, 1866—Realejo (monog.); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Puntarenas; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 202, pl. 12, fig. 2, 1882—Realejo and Puntarenas; Cherrie, Proc. U. S. Nat. Mus., 14, p. 528, 1891—Puntarenas, Costa Rica (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 194, 1904—Realejo and Puntarenas (monog.); Carriker, Ann. Carnegie Mus., 6, p. 780, 1910—Pígres, Costa Rica.

*Vireo ochraceus* subsp. *a* *V. pallens* Gadow, Cat. Bds. Brit. Mus., 8, p. 302, 1883—Nicaragua and Costa Rica (crit.).

**Range.**—Pacific coast (mangrove swamps) of Nicaragua (Realejo) and Costa Rica (Puntarenas, Pígres).

**\**Vireo huttoni huttoni* Cassin. HUTTON'S VIREO.**

*Vireo huttoni* Cassin, Proc. Acad. Nat. Sci. Phila., 5, p. 150, 1851—Monterey and Georgetown, California (type, from Monterey, in U. S. National Museum; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 31, 1899, and Grinnell, Univ. Calif. Pub. Zool., 38, p. 298, 1932); Baird, Rev. Amer. Bds., 1, p. 357, 1866—part, California; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 203, 1882—part, California; Gadow, Cat. Bds. Brit. Mus., 8, p. 303, 1883—part, California.

*Vireo huttoni obscurus* Anthony, Zoe, 1, p. 307, Dec., 1890—Beaverton, Washington County, Oregon (type in collection of A. W. Anthony, now in Carnegie Museum; cf. Todd, Ann. Carnegie Mus., 18, p. 358, 1928); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 196, 1904—western Oregon to Vancouver Island (monog.); Grinnell, Condor, 24, p. 32, 1922 (crit.); Oberholser, Auk, 39, p. 77, 1922 (crit.).

*Vireo huttoni insularis* Rhoads, Auk, 10, p. 239, 1893—Victoria, Vancouver Island, British Columbia (type in Provincial Museum of Victoria, British Columbia); Grinnell, Condor, 24, p. 32, 1922 (crit.); Oberholser, Auk, 39, p. 78, 1922 (crit.).

*Vireo mailliardorum* Grinnell, Condor, 5, p. 157, 1903—Friar's Harbor, Santa Cruz Island, California (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 298, 1932).

*Vireo huttoni mailliardorum* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 743, 1904 (ex Grinnell).

*Vireo huttoni oberholseri* Bishop, Condor, 7, p. 142, 1905—Witch Creek, San Diego County, California (type in coll. of L. B. Bishop); Grinnell, Condor, 8, p. 148, 1906—Escondido, San Diego County, California (crit.); idem, i.c., 11, p. 66, 1909 (crit.).

*Vireo huttoni huttoni* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 195, 1904—California (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 195, 1932—Lower California.



*Range*.—Pacific coast strip of western North America, from extreme southern British Columbia (chiefly Vancouver Island) south through Washington, Oregon, and California, west of the high Sierra, to about latitude 30° in northwestern Lower California.<sup>1</sup>

17: California (Los Gatos, 1; San Geronimo, 2; Clipper Gap, 3; Monterey, 3; Nicasio, 5; Oakland, 1); Oregon (Tillamook, 1; Corvallis, 1).

**\*Vireo huttoni stephensi** Brewster. STEPHENS'S VIREO.

*Vireo huttoni stephensi* Brewster, Bull. Nutt. Orn. Cl., 7, p. 142, 1882—Chiricahua Mountains, Arizona (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 345, 1930); idem, Auk, 2, p. 197, 1885—Santa Rita Mountains, Arizona (juv. descr.); Scott, Auk, 2, p. 354, 1885—Santa Catalina Mountains, Arizona; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 197, 1904—southern Arizona to western Texas and northern Mexico (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 178, 1906—La Cienaga de las Vacas and Arroyo del Buey, Durango; van Rossem, Trans. San Diego Soc. N. H., 6, p. 280, 1931—fifteen miles southwest of Nogales, Sonora.

*Vireo huttoni stephensi* Reichenow and Schallow, Journ. Orn., 32, p. 401, 1884 (lapsus for *V. h. stephensi* Brewster).

(?) *Vireo huttoni mexicanus* (not of Ridgway?) Phillips, Auk, 28, p. 83, 1913—Yerba Buena, Galindo, and Rampahuila, Tamaulipas (Sept., Oct. to March).<sup>2</sup>

*Range*.—Southern Arizona to central western Texas and south to Tamaulipas, Durango, Zacatecas, and Nayarit, Mexico.

11: Arizona (Paradise, 1; Huachuca Mountains, 6; Chiricahua, 2); Mexico (Cerro Blanco, Sonora, 1; Coyotes, Durango, 1).

**\*Vireo huttoni cognatus** Ridgway. FRAZAR'S VIREO.

*Vireo huttoni cognatus* Ridgway, Proc. Biol. Soc. Wash., 16, p. 107, 1903—Sierra de la Laguna, Lower California (type in collection of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 345, 1930); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 199, 1904—Cape San Lucas district of Lower California (full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 195, 1928—Cape district.

*Range*.—Cape district of Lower California.

3: Lower California (Sierra de la Laguna, 3).

<sup>1</sup> It is now an established fact that none of the described races (*obscurus*, *insularis*, *mailliardorum*, *oberholseri*) can be maintained. Cf. Grinnell and Oberholser, l.c.

<sup>2</sup> These specimens should be carefully reexamined in view of Ridgway's explicit statement that breeding birds from Miquihuana (hill country west of Victoria), Tamaulipas, are "certainly referable" to *V. h. stephensi*.

**Vireo huttoni mexicanus** Ridgway. MEXICAN VIREO.

*Vireo huttoni mexicanus* Ridgway, Proc. Biol. Soc. Wash., 16, p. 107, 1903—Mount Orizaba, Puebla (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 196, 1904—part, southern portion of Mexican plateau (full bibliog.).

*Vireo huttoni* (not of Cassin) Baird, Rev. Amer. Bds., 1, p. 357, 1866—part, Oaxaca; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 203, 1882—part, Mexican references and localities; Gadow, Cat. Bds. Brit. Mus., 8, p. 303, 1883—part, Mexico.

*Vireosylva huttoni* Sumichrast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—alpine region of Vera Cruz.

*Vireo huttoni stephensi* (not of Brewster) Chapman, Bull. Amer. Mus. N. H., 10, p. 40, 1898—Las Vegas, Vera Cruz.

*Range*.—Temperate zone of more southern portions of Mexico, from San Luis Potosi (near Jesus Maria) and southern Tamaulipas to Vera Cruz, Oaxaca, and Michoacan.

**Vireo huttoni vulcani** Griscom.<sup>1</sup> GUATEMALAN VIREO.

*Vireo huttoni vulcani* Griscom, Amer. Mus. Nov., 438, p. 3, 1930—Quetzaltenango, Guatemala (type in Dwight Collection, now in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 64, p. 319, 1932—Momostenango, Chichicastenango, Tecpam, Zanjón, and Quetzaltenango, western Guatemala.

*Vireo huttoni* (not of Cassin) Salvin, Ibis, 1874, p. 99—Volcan de Fuego, Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 203, 1882—part, Guatemala (Calderas, Volcan de Fuego); Gadow, Cat. Bds. Brit. Mus., 8, p. 303, 1883—part, Guatemala.

*Vireo huttoni mexicanus* (not of Ridgway, 1903) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 196, 1904—part, Guatemala.

*Range*.—Temperate zone of western Guatemala.

**\*Vireo carmioli** Baird.<sup>2</sup> CARMIOL'S VIREO.

<sup>1</sup> *Vireo huttoni vulcani* Griscom: "Similar to *V. h. mexicanus*, but olive-green above with a slight brownish tinge, entirely lacking the dull gray tint on the pileum and back, the rump scarcely brighter than the rest of the upper parts; under parts in breeding adults radically different from any other race in being almost uniform pale dirty yellowish olive." (Griscom, l.c.).

<sup>2</sup> *Vireo carmioli* Baird, though not unlike *V. griseus semiflavus* in general coloration, nevertheless differs very markedly by proportionately much longer wings, shorter and more convex bill, and shorter, stouter tarsus. The lengthened pale yellow superciliary streak is another striking peculiarity. Its habitat in the Subtropical zone, taken in conjunction with the different proportions, makes it probable that we have to deal here with a separate specific entity.

*Additional material examined*.—Costa Rica: south slope of Volcan de Irazú, 1.—Panama: Boquete, Chiriquí, 1.

*Vireo carmioli* Baird, Rev. Amer. Bds., 1, p. 356, 1866—Dota Mountains, Costa Rica (type in U. S. National Museum); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Dota Mountains; Frantzius, Journ. Orn., 17, p. 295, 1869—Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 203, pl. 12, fig. 3, 1882—Costa Rica (Dota Mountains and Volcan de Irazú) and Panama (Volcan de Chiriquí); Gadow, Cat. Bds. Brit. Mus., 8, p. 303, 1883—Costa Rica and Panama; Bangs, Proc. New Engl. Zool. Cl., 3, p. 59, 1902—Boquete, Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 199, 1904—Costa Rica and Chiriquí (monog.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 274, 1910—Coliblanco and Volcan de Turrialba, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 779, 1910—Volcan de Turrialba, Coliblanco, San Juan de Irazú, El Copey, Las Vueltas de Dota, Azahar de Cartago, Cachí, and Volcan de Irazú, Costa Rica (habits).

*Vireo carmioli* (?) Ridgway, Proc. U. S. Nat. Mus., 6, p. 411, 1884—"Pirris" = Birris, Costa Rica (crit.).

*Vireo superciliaris* (Ridgway MS.) Cherrie, Proc. U. S. Nat. Mus., 14, p. 340, 1891—Birris, Costa Rica (type in U. S. National Museum).

**Range.**—Subtropical zone of Costa Rica and extreme western Panama (Chiriquí).

8: Costa Rica (Coliblanco, 3; Volcan de Turrialba, 1; Volcan de Irazú, 2; La Estrella de Cartago, 2).

**\**Vireo hypochryseus hypochryseus* Sclater. GOLDEN VIREO.**

*Vireo hypochryseus* Sclater, Proc. Zool. Soc. Lond., 1862, p. 369, pl. 46—Mexico (type in coll. of P. L. Sclater, now in the British Museum); Lawrence, Bull. U. S. Nat. Mus., 4, p. 18, 1876—Quiotepec, Oaxaca; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 204, 1881—part, Oaxaca (Quiotepec); Gadow, Cat. Bds. Brit. Mus., 8, p. 304, 1883—part, Mexico; Loomis, Auk, 19, p. 88, 1902—Rosario, Sinaloa.

*Vireo hypochryseus hypochryseus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 201, 1904—western Mexico (monog., bibliog.).

**Range.**—Western Mexico, in states of Chihuahua (Hacienda de San Rafael), Sinaloa (Plomosas, Rosario), Jalisco (Barranca Ibarra, San Sebastian, Tuxpan), and Oaxaca (Quiotepec).

1: Mexico (Tuxpan, Jalisco, 1).

***Vireo hypochryseus sordidus* Nelson. TRES MARIAS VIREO.**

*Vireo hypochryseus sordidus* Nelson, Proc. Biol. Soc. Wash., 12, p. 10, 1898—Maria Madre Island, Tres Marias (type in U. S. National Museum); idem, N. Amer. Fauna, 14, p. 54, 1899—Maria Madre and Maria Magdalena Islands (habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 202, 1904—Tres Marias Islands (monog.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 311, 1926—Maria Madre Island.

*Vireo hypochryseus* (not of Sclater) Baird, Rev. Amer. Bds., 1, p. 370, 1866—Tres Marias (monog.); Grayson, Proc. Bost. Soc. N. H., 14, p. 281, 1871—Tres Marias; Lawrence, Mem. Bost. Soc. N. H., 2, p. 272, 1874—Tres Marias; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 264, 1881—part, Tres Marias; Gadow, Cat. Bds. Brit. Mus., 8, p. 304, 1883—part, Tres Marias Islands.

*Range*.—Tres Marias Islands, off western Mexico.

**\*Vireo vicinior Coues. GRAY VIREO.**

*Vireo vicinior* Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 75—Fort Whipple, Arizona (type in U. S. National Museum); Baird, Rev. Amer. Bds., 1, p. 361, 1866—Fort Whipple (crit.); Elliot, Illustr. New Unfig. N. Amer. Bds., Part 1, pl. 7, 1869—Fort Whipple; Gadow, Cat. Bds. Brit. Mus., 8, p. 300, 1883—Arizona; Scott, Auk, 2, pp. 321–326, 1885—Santa Catalina Mountains, Arizona (habits, nest, and eggs); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 202, 1904—southern California, Nevada, Arizona, New Mexico, and northwestern Mexico (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 196, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1932—Sarie, Sonora.

*Vireo vicinior californicus* Stephens, Auk, 7, p. 159, 1890—east of Riverside, California (type lost, formerly in collection of F. Stephens; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 298, 1932).

*Range*.—Southern California (south from Kern County), southern Nevada, the Grand Canyon of the Colorado, and southwestern Colorado south to northwestern Lower California, Sonora (Guaymas, Saric), and Durango; possibly wintering in the Cape district of Lower California and in the two other Mexican states.

1: New Mexico (Lone Mountain, 1).

**Vireo nanus Nelson.<sup>1</sup> DWARF VIREO.**

*Vireo nanus* Nelson, Proc. Biol. Soc. Wash., 12, p. 59, 1898—Querendaro, Michoacan, Mexico (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 204, 1904—Querendaro.

*Range*.—Southwest Mexico, in State of Michoacan (Querendaro).

**\*Vireo bellii bellii Audubon. BELL'S VIREO.**

*Vireo belli(i)* Audubon, Birds Amer. (8vo ed.), 7, p. 333, 1844—near St. Joseph, Missouri (cotypes in U. S. National Museum and in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 18, 1899); Baird, Rev. Amer. Bds., 1, p. 358, 1866—part, localities in Kansas, Arkansas, and Texas; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 200, 1881—part, North America (excl. Arizona) and Mexico

<sup>1</sup> *Vireo nanus* Nelson, known from a single adult male in worn breeding plumage, is of uncertain affinity. More information about this species is urgently desired.

(Mazatlan; Santa Efigenia and Tehuantepec City, Oaxaca); Gadow, Cat. Bds. Brit. Mus., 8, p. 301, 1883 (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 125, 1907—Gualan, San José, and Patulul, Guatemala.

*Vireo bellii*(i) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 204, 1904 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 21, p. 366, 1905—Escuinapa, southern Sinaloa; Phillips, Auk, 28, p. 83, 1911—Guiaves, Galindo, Caballeros, and Rio Santa, Tamaulipas; Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz; idem, l.c., 68, p. 400, 1928—Chivelá and Tapanatepec, Oaxaca; Griscom, Bull. Amer. Mus. N. H., 64, p. 318, 1932—Sacapulas, Ocos, Hacienda California, and San José, Guatemala.

*Range*.—Breeds in Austral zones from northeastern Colorado, southern North Dakota, northern Illinois, and northwestern Indiana to eastern Texas and Tamaulipas; winters from Mexico to Guatemala and northern Nicaragua; accidental in New Hampshire and Michigan.

9: Illinois (Hamilton, 2); Kansas (Topeka, 1); Mexico (Iguala, Guerrero, 1); Guatemala (San José, Escuintla, 2; Patulul, Solola, 1; Gualan, Zacapa, 2).

**\**Vireo bellii medius* Oberholser. TEXAS VIREO.**

*Vireo bellii medius* Oberholser, Proc. Biol. Soc. Wash., 16, p. 17, Feb. 21, 1903—Boquillas, Texas (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 206, 1904—southwestern Texas, south into Mexico (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 179, 1906—Rancho Baillon, Durango.

*Range*.—Southwestern Texas (Presidio, Brewster, and Kinney counties) and southward into Mexico, in states of Durango, Coahuila, and Guanajuato.<sup>1</sup>

1: Texas (near Pecos, 1).

**\**Vireo bellii arizonae* Ridgway. ARIZONA VIREO.**

*Vireo bellii arizonae* Ridgway, Proc. Biol. Soc. Wash., 16, p. 108, Sept. 30, 1903—Tucson, Arizona (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 207, 1904—Arizona to western Texas and northwestern Mexico (monog., full bibliog.); Oberholser, Auk, 34, p. 322, 1917 (crit., range); van Rossem, Trans. San Diego Soc. N. H., 6, p. 280, 1931—San Javier, Saric, Obregón, Tésia, Chinobampo, north of Guaymas, and Tóbari Bay, Sonora.

<sup>1</sup> I do not know on what authority the fourth edition of the A. O. U. Check List, 1931 (p. 235) extends its range as far south as Guatemala, whence this form has not yet been recorded.

*Range*.—Breeds in the Lower Austral zone of southeastern California (along the Colorado River), southern Arizona, southwestern New Mexico, and central-western Texas south to Chihuahua and Sonora.

3: Arizona (Tucson, 2; Fort Lowell, 1).

**\*Vireo bellii pusillus** Coues. LEAST VIREO.

*Vireo pusillus* Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 76, 1866—Cape San Lucas, Lower California (type in U. S. National Museum; cf. Ridgway, Auk, 25, p. 224, 1908); Baird, Rev. Amer. Bds., 1, p. 360, 1866—part, Cape San Lucas and San Diego, California; Gadow, Cat. Bds. Brit. Mus., 8, p. 302, 1883—part, California (ex Baird).

*Vireo pusillus albatrus* Grinnell, Condor, 3, p. 187, 1901—Pasadena, California (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 32, p. 298, 1932); idem, Auk, 25, p. 85, 1908 (crit.).

*Vireo bellii pusillus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 208, 1904 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 196, 1928—Lower California (crit.).

*Range*.—Breeds, chiefly in Lower Austral zone, from the upper Sacramento Valley, California, mainly west of the high Sierra, to about latitude 30° in Lower California; winters in southern Lower California.

4: California (Kern County, 1; Riverside, 1; Stockton, 1; Dulzura, 1).

**\*Vireo latimeri** Baird. LATIMER'S VIREO.

*Vireo latimeri* Baird, Rev. Amer. Bds., 1, p. 364, 1866—north side of Porto Rico (type in U. S. National Museum); Bryant, Proc. Bost. Soc. N. H., 10, p. 252, 1866—Porto Rico; Sundevall, Ofvers. Vetensk.-Akad. Förh., 26, p. 596, 1869—Porto Rico; Gundlach, Journ. Orn., 26, p. 165, 1878—Porto Rico (nest and eggs); idem, Anal. Soc. Esp. Hist. Nat., 7, p. 167, 1878—Porto Rico; Gadow, Cat. Bds. Brit. Mus., 8, p. 304, 1883—Porto Rico; Cory, Auk, 3, p. 187, 1886—Porto Rico (descr.); idem, Bds. W. Ind., p. 74, 1889—Porto Rico; Bowditch, Auk, 20, p. 16, 1903—San Juan, Mayagüez (habits, song); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 210, 1904—Porto Rico (monog.); Wetmore, Bull. U. S. Dept. Agric., 326, p. 95, 1916—Porto Rico (food); Struthers, Auk, 40, p. 476, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 114, 1926—Cartagena and Anegada lagoons, Ensenada, Cabo Rojo Lighthouse, and between Utuado and Arecibo; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 492, 1927—Porto Rico (monog.).

*Range*.—Island of Porto Rico (western parts), Greater Antilles.

8: Porto Rico (unspecified, 8).

**\*Vireo flavifrons Vieillot. YELLOW-THROATED VIREO.**

*Vireo flavifrons* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 85, pl. 54, pub. 1808—"Etats Unis"—eastern United States (part, descr. of male;<sup>1</sup> type in coll. of P. L. Vieillot); Audubon, Orn. Biog., 2, p. 119, pl. 119, 1834 (monog., habits); Wyatt, Ibis, 1871, p. 324—Pirico, Colombia; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 194, 1881—eastern North America and Central America south to Panama and Colombia; Gadow, Cat. Bds. Brit. Mus., 8, p. 298, 1883 (monog.); Allen, Bull. Amer. Mus. N. H., 13, p. 173, 1900—Onaca, Santa Marta, Colombia; idem, Auk, 17, p. 366, 1900—Onaca and Minca, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 317, 1932—Guatemala (winter).

*Vireosylvia flavifrons* Baird, Rev. Amer. Bds., 1, p. 346, 1866—eastern United States south to Costa Rica (monog.); Salvin and Godman, Ibis, 1880, p. 118—Minca, Colombia.

*Lanivireo flavifrons* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 163, 1904 (monog.); Riley, in Shattuck, The Bahama Is., p. 365, 1905—New Providence, Cay Lobos, and Andros; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 124, 1907—Gualan and El Rancho, Guatemala; Ferry, l.c., p. 274, 1910—Guayábo, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 781, 1910—Pígres, Cachí, Carrillo, Guápiles, and El Hogar, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 36, p. 540, 1917—Santa Elena, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 431, 1922—Minca and Onaca, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 108, 1923—Cardenas, Cuba, and Caballos Mountains, Isle of Pines; Griscom, Amer. Mus. Nov., 282, p. 7, 1927—Garachiné, Panama.

*Muscicapa sylvicola* Wilson, Amer. Orn., 1, p. 117, pl. 7, fig. 3, 1818 (after Sept. 1)—no locality stated, but apparently Pennsylvania (type in Peale's Museum, probably lost).

*Range.*—Transition and Austral zones of eastern North America, from Saskatchewan, southern Manitoba, Ontario, southern Quebec, and Maine south to Texas, Louisiana, Alabama, and northern Florida; winters from eastern and southern Mexico through Central America to Panama and Colombia (Pirico; Santa Elena; Onaca and Minca, Santa Marta district), casually in the Bahamas (New Providence, Cay Lobos, Andros), Cuba, and the Isle of Pines.

51: Connecticut (East Hartford, 9); Massachusetts (unspecified, 1); New York (Cayuga, 1; Sennett, 1; Shelter Island, 2); Rhode Island (Fruit Hill, 1); New Jersey (Englewood, 1); District of Columbia (Washington, 1); Florida (Nassau County, 1; Key West, 2; Puntarasa, 1); Mississippi (Holly Springs, 1); Louisiana (New Orleans, 1); Texas (Corpus Christi, 2; Fort Worth, 1); Illinois (Addison, 1; Grand Chain, 4; Waukegan, 2; Lake Forest, 1; Prairie View, 1; Deerfield, 2); Indiana (Bluffton, 1; Brookville, 1); Wisconsin

<sup>1</sup> The alleged "female" unquestionably pertains to *V. s. solitarius*.

(Beaver Dam, 9); Guatemala (Gualan, Zacapa, 2); Costa Rica (Guayábo, 1).

**\*Vireo solitarius solitarius (Wilson).<sup>1</sup> SOLITARY VIREO.**

*Muscicapa solitaria* Wilson, Amer. Orn., 2, p. 143, pl. 17, fig. 6, 1810—Bartram's Woods, near Philadelphia, Pennsylvania (location of type not indicated, probably lost).

*Vireosylvia solitaria* Baird, Rev. Amer. Bds., 1, p. 347, 1866 (part).

*Lanivireo solitarius solitarius* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 167, 1904 (monog., full bibliog.); Phillips, Auk, 28, p. 83, 1911—Tamaulipas;<sup>2</sup> Barbour, Mem. Nutt. Orn. Cl., 6, p. 108, 1923—Cardenas, Cuba.

*Vireo solitarius* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 196, 1881—North America, in winter south to Guatemala; Gadow, Cat. Bds. Brit. Mus., 8, p. 298, 1883 (monog.).

*Vireo solitarius solitarius* Griscom, Bull. Amer. Mus. N. H., 64, p. 317, 1932—Guatemala (crit.).

*Lanivireo solitarius* Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 124, 1907—Lake Atitlan and road to Tecpam, Guatemala.

**Range.**—Canadian and Transition zones of North America from southern Mackenzie, Alberta, central Manitoba, northern Ontario, southern Quebec, and Cape Breton Island south to northern North Dakota, Minnesota, Michigan, the mountains of southern Pennsylvania, and Rhode Island; winters in the Gulf states from Texas to Florida and from eastern Mexico to northern Nicaragua; accidental in Cuba.

32: Connecticut (East Hartford, 9); Massachusetts (Ipswich, 1; Taunton, 1); New York (Miller Place, Suffolk County, 2); Wisconsin (Beaver Dam, 1; Woodruff, Vilas County, 1); Illinois (Deerfield, 2; Lake Forest, 3; Waukegan, 1; Ravinia, 1); Ohio (Columbus, 1); Arkansas (Winslow, 1); Georgia (Sapelo Island, 1); Louisiana

<sup>1</sup> *Vireo propinquus* (Baird). VERA PAZ VIREO.

*Vireosylvia propinqua* Baird, Rev. Amer. Bds., 1, p. 348, 1866—Coban, Vera Paz (type in U. S. National Museum).

*Vireo propinquus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 197 (in text), 1881—Coban (crit.).

*Lanivireo propinquus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 166, 1904—Coban (crit.).

This supposed "species," resting on a single specimen, obtained with numbers of *V. flavifrons* and *V. s. solitarius* in their winter quarters at Coban in Guatemala, and intermediate in wing structure and coloration, is probably a hybrid between these two species.

<sup>2</sup> Mr. Peters (in litt.) does not believe that any of the specimens, even those taken in May and June, were breeding birds.



(Buras, 1); Texas (Harlingen, 1); Mexico (San Luis Potosi, 1; Pueblo Viejo, Vera Cruz, 1); Guatemala (near Tecpam, 1; Lake Atitlan, 1; Coban, 1).

**\*Vireo solitarius alticola Brewster. MOUNTAIN VIREO.**

*Vireo solitarius alticola* Brewster, Auk, 3, p. 111, 1886—highlands of Macon County, North Carolina (type in collection of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 344, 1930).

*Lanivireo solitarius alticola* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 169, 1904—southern Allegheny Mountains (monog., full bibliog.).

*Range.*—Canadian and Transition zones of the Alleghenies, from western Maryland to eastern Tennessee and northern Georgia; winters in the lowlands from South Carolina to Florida.

12: Florida (Gainesville, 3; Town Point, Santa Rosa County, 1; Miami Beach, 1; Nassau County, 2; Lake Worth, 1); South Carolina (Mount Pleasant, 1); North Carolina (Raleigh, 3).

**\*Vireo solitarius plumbeus Coues. PLUMBEOUS VIREO.**

*Vireo plumbeus* Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 74—"High central plains to the Pacific" (type from Fort Whipple, Arizona, in U. S. National Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 198, 1881—southern Rocky Mountains and Mexico (plains of Colima and Oaxaca).

*Vireosylvia plumbea* Baird, Rev. Amer. Bds., 1, p. 349, 1866—southern Rocky Mountains, in winter to Colima, Mexico (monog.).

*Vireo solitarius* subsp.  $\beta$  *Vireo plumbeus* Gadow, Cat. Bds. Brit. Mus., 8, p. 299, 1883—Arizona to northern Mexico (crit.).

*Lanivireo solitarius plumbeus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 170, 1904 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 179, 1906—Rio Sestín, Durango; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 41, 1927—Labrados, Sinaloa.

*Vireo solitarius plumbeus* Chapman, Bull. Amer. Mus. N. H., 10, p. 40, 1898—Las Vegas, Vera Cruz (breeding); Cary, Auk, 18, p. 237, 1901—Black Hills, Wyoming; Oberholser, Auk, 19, p. 301, 1902—mountains west of Pecos River, Texas; van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1931—Tesia and Chinobampo, Sonora.

*Range.*—Rocky Mountains from northern Nevada, northern Utah, southern Montana, northeastern Wyoming, and southwestern South Dakota south through Arizona and western Texas to Chihuahua and Vera Cruz, Mexico; winters south to Colima and Oaxaca.

11: Arizona (Huachuca Mountains, 4; Chiricahua Mountains, 1; Santa Rita Mountains, 2; Paradise, 1); New Mexico (Silver City, 1); Texas (Fort Davis, 1); Mexico (Babicora, Chihuahua, 1).

**\*Vireo solitarius cassinii Xantus. CASSIN'S VIREO.**

*Vireo cassinii*(i) Xantus, Proc. Acad. Nat. Sci. Phila., 1858, p. 117—Fort Tejon, California (type in U. S. National Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 197, 1881—California and Mexico.

*Vireo solitarius* subsp. *a* *Vireo cassinii* Gadow, Cat. Bds. Brit. Mus., 8, p. 299, 1883—California, Nevada, "Arizona," and northern Mexico.

*Lanivireo solitarius cassinii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 172, 1904 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 179, 1906—La Cienaga de las Vacas and Rio Sestin, Durango.

*Vireo solitarius cassinii* Grinnell, Univ. Calif. Pub. Zool., 32, p. 195, 1928—Sierra San Pedro Mártir, Lower California (breeding); van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1931—Tecoripa, Saric, and Chinobampo, Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 318, 1932—Finca La Primavera, Guatemala.

*Range*.—Transition zone from British Columbia, southwestern Alberta, Idaho, and western Montana south through California and western Nevada to the Sierra San Pedro Mártir, Lower California; in winter south through Arizona to Jalisco, Michoacan, Guanajuato, Oaxaca, and Chiapas, Mexico, and western Guatemala (one record).

8: Arizona (Chiricahua Mountains, 3; Huachuca Mountains, 1; Ciengo Station, 1); New Mexico (Mimbres, 1); California (Piute Mountains, Kern County, 1); Mexico (Lower California, 1).

**\*Vireo solitarius lucasanus Brewster. SAN LUCAS VIREO.**

*Vireo solitarius lucasanus* Brewster, Auk, 8, p. 147, 1891—San José del Rancho [near Triunfo], Lower California (type in collection of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 344, 1930); idem, Bull. Mus. Comp. Zool., 41, p. 174, 1902—San José del Cabo, San José del Rancho, etc., Cape region of Lower California (habits, nest, and eggs); Grinnell, Univ. Calif. Pub. Zool., 32, p. 195, 1928—Cape district of Lower California.

*Lanivireo solitarius lucasanus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 175, 1904—Cape District (monog., full bibliog.); Townsend, Bull. Amer. Mus. N. H., 48, p. 22, 1923—Miraflores and San Bernardo Mountains.

*Range*.—Resident in the Cape San Lucas district of Lower California.

4: Mexico (Lower California, Sierra de la Laguna, 4).

**Vireo solitarius notius van Tyne.<sup>1</sup> PINE RIDGE VIREO.**

*Vireo solitarius notius* van Tyne, Occas. Pap. Mus. Zool. Univ. Michigan, 256, p. 2, Feb., 1933—pine ridge region, twelve miles south of El Cayo, British Honduras (type in University of Michigan, Museum of Zoology).

*Range*.—Pine ridge region of British Honduras (south of El Cayo).

**Vireo solitarius montanus van Rossem.<sup>2</sup> MONTANE VIREO.**

*Vireo solitarius montanus* van Rossem, Trans. San Diego Soc. N. H., 7, No. 24, p. 285, Oct. 6, 1933—Hacienda Chilata, Dept. Sonsonate, El Salvador (type in California Institute of Technology, Pasadena).

*Vireo solitarius solitarius* (not *Muscicapa solitaria* Wilson) Griscom, Bull. Amer. Mus. N. H., 64, p. 317, 1932—part, Finca La Primavera, mountains of Guatemala.

*Range*.—Mountains of Guatemala (Finca La Primavera) and El Salvador (San José del Sacare; Hacienda Chilata).

**\*Vireo virescens virescens Vieillot.<sup>3</sup> RED-EYED VIREO.**

*Vireo virescens* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 84, pl. 53, 1808—no locality given (type in coll. of P. L. Vieillot); idem,

<sup>1</sup> *Vireo solitarius notius* van Tyne: "Much like *V. solitarius cassini*, but characterized by a very short, rounded wing and proportionately longer tail. Wing tip shorter than tarsus; fifth primary longer than ninth; tenth (outermost) primary decidedly larger than in the other known forms of the species. Wing, 63–65, (female) 65–66; tail, 48½–50. Colored like *V. s. cassini*, but the upper parts, especially the crown darker; crown and auricular region pure gray, not washed with green; outer web of the outer tail feathers more extensively white." (van Tyne, l.c.).

<sup>2</sup> *Vireo solitarius montanus* van Rossem: "Nearest to *V. s. notius*, but decidedly larger and under parts more heavily overlaid with dusky olive green. Wing, 68–69; tail, 52." (van Rossem, l.c.).

This race, according to the describer, differs from *V. s. cassini* in slightly darker, more leaden upper parts, darker and more greenish under parts, the lateral tail feathers having more white on both webs, in having a much longer outer primary, and more rounded wing, in which the fifth primary is longer than the ninth.

<sup>3</sup> *Motacilla olivacea* Linnaeus (Syst. Nat., 12th ed., 1, p. 327, 1766) has been universally accepted for the Red-eyed Vireo, following Baird (Rev. Amer. Bds., 1, p. 335, 1866), who sought to restrict the name to that species. Linnaeus never handled a specimen himself, but based his description merely on the accounts of earlier authors. Of these, the "Olive-coloured Fly-catcher" of Edwards (Glean. Nat. Hist., 1, p. 54, lower fig.) is the Black-whiskered Vireo of Jamaica, whereas "The Red-ey'd Fly-catcher" of Catesby (Nat. Hist. Carolina, 1, p. 54, pl. 54, lower fig.) represents indeed the North American species. The third reference, *Muscicapa jamaicensis* Brisson (Orn., 2, p. 410, 1760), refers partly to the one, partly to the other species. As Linnaeus's diagnosis affords no clue as to which one served as his principal basis, I see no way but to reject the name *Motacilla olivacea* on account of its ambiguity rather than transfer it to the Black-whiskered Vireo, as has been proposed by Bangs and Penard (Bull. Mus. Comp. Zool., 67, p. 206, 1925).

Nouv. Dict. Hist. Nat., nouv. éd., 36, p. 104, 1819—type locality stated to be New Jersey.<sup>1</sup>

*Vireo bogotensis* Bryant, Proc. Bost. Soc. N. H., 7, p. 227, 1860—Bogotá, Colombia (type in coll. of H. Bryant, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs and Penard, Bull. Mus. Comp. Zool., 67, p. 205, 1925).

*Vireosylva agilis* (not *Lanius agilis* Lichtenstein) Pelzeln, Orn. Bras., 2, p. 73, 1868—part, Marabitanas, Rio Negro, Brazil (male, March 9; female, March 3; spec. in Vienna Museum examined).

*Vireosylva(i)a olivacea* (not *Motacilla olivacea* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 23, p. 151, 1855—Bogotá; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Medellin and Remedios, Colombia; Salvin and Godman, Ibis, 1880, p. 118—Santa Marta; Berlepsch, Journ. Orn., 32, p. 285, 1884—Bucaramanga, Colombia (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 147, 1903 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—New Providence, Cay Lobos, Watlings Island, and Great Inagua; Carriker, Ann. Carnegie Mus., 6, p. 783, 1910—Costa Rica; Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 156, 1916—Boca de Sina, Rio Cunucunuma, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 539, 1917—Santa Elena, Chicoral, and Villavicencio, Colombia; idem, l.c., 55, p. 586, 1926—Rio Suno, Ecuador; Todd and Carriker, Ann. Carnegie Mus., 14, p. 432, 1922—Mamatoco, La Tigrera, and Fundación, Santa Marta, Colombia; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 223, 1922—Mount Sapo, Darien.

*Vireo olivaceus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 188, 1881; Gadow, Cat. Bds. Brit. Mus., 8, p. 294, 1883 (monog.); Allen, Bull. Amer. Mus. N. H., 3, p. 346, 1891—Chapada, Matto Grosso; idem, Auk, 17, p. 366, 1900—Colombia; idem, Bull. Amer. Mus. N. H., 21, p. 277, 1905—Don Diego, Santa Marta; Ihering, Cat. Faun. Braz., 1, p. 335, 1907—Matto Grosso and Venezuela (Mérida); Chubb, Bds. Brit. Guiana, 2, p. 392, 1921—Ituribisci River, British Guiana.

*Vireosylva virescens virescens* Naumburg, Bull. Amer. Mus. N. H., 60, p. 333, 1930—Matto Grosso (Chapada).

*Range*.—Breeds from British Columbia, Mackenzie, Manitoba, Ontario, Anticosti Island, and Cape Breton Island south to Oregon, Washington, Idaho, southern Montana, eastern Wyoming and Colorado, western Texas, northern Coahuila, southern Alabama, and central Florida;<sup>2</sup> migrates through Central America (casually

<sup>1</sup> Bangs and Penard (l.c., p. 205, 1925) suggest Pennsylvania as type locality. Vieillot (l.s.c., p. 104), however, quite explicitly says: "Je n'ai rencontré qu'un seul individu de cette espèce dans un bosquet de New-Jersey."

<sup>2</sup> Salvin (Ibis, 1890, p. 84) claims to have "received, both from Mr. W. B. Richardson and Mr. Blancaneaux, eggs of this species [= *Vireo olivaceus*] along with the parent birds," and adds "that its residence in eastern Mexico and British Honduras is proved, and almost certainly extends to the Bay Islands, whence skins have been sent us." We cannot help thinking that there must be some

Cuba and the Bahamas) and winters in the northern half of South America, south to Bolivia and western Brazil (Matto Grosso).<sup>1</sup>

148: Maine (Upton, 1); Connecticut (East Hartford, 12); Massachusetts (Great Island, 1; Brookline, 1; Longwood, 1; Ipswich, 1; unspecified, 1); New York (Shelter Island, 7; Rochester, 1; Suffolk County, 1; Locust Grove, 1); Pennsylvania (Erie, 1); North Carolina (Raleigh, 3); Florida (East Pass, 1; Gainesville, 2; Puntarasa, 3; Mary Esther, 1; Key West, 1); Georgia (Altamaha River swamp, 1); Mississippi (Vicksburg, 4; Holly Springs, 10); Louisiana (New Orleans, 1); Texas (Fort Worth, 3; Ingram, 1); Arkansas (Winslow, 1); Colorado (Fort Lyon, 2); Montana (Columbia Falls, 4); Iowa (Cedar Rapids, 2); Illinois (Grand Chain, 10; Olive Branch, 2; Mound City, 6; Cahokia River, St. Clair County, 1; Cook County, 2; Chicago, 6; Lake Forest, 7; Lyons, 2; Deerfield, 4; Libertyville, 2; Ravinia, 2; Joliet, 6; Waukegan, 2; Hegewisch, 1; Glen Ellyn, 3; Addison, 1; Henry, 4); Wisconsin (Woodruff, Vilas County, 2; Beaver Dam, 10); Michigan (Harbert, 1); Mexico (Yucatan, Rio Lagartos, 1); Bahama Islands (Inagua, Horse Pond, 1; Watlings Island, Riding Rock, 1); Cuba, Isle of Pines (Nueva Gerona, 1); Brazil (Chapada, Matto Grosso, 1).

**\*Vireo virescens flavoviridis (Cassin).<sup>2</sup> YELLOW-GREEN VIREO.**

*Vireosylva flavoviridis* Cassin, Proc. Acad. Nat. Sci. Phila., 5, p. 152, 1851—Panama and San Juan de Nicaragua, Nicaragua (type formerly in coll. of the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 31, 1899); idem, l.c., 6, pl. 2, 1852; Sclater, Proc. Zool. Soc. Lond., 24, p. 298, 1856—Cordoba, Vera Cruz; idem, l.c., 27,

mistake here with respect to the identification of either eggs or birds, as the Red-eyed Vireo has not since been found breeding so far south.

<sup>1</sup> Unquestionable Red-eyed Vireos from yet unrecorded winter localities, which we have examined, are male and female, the latter in full molt, collected by J. Natterer on March 9 and 3, 1831, respectively, at Marabitanas, Rio Negro (Vienna Museum); an adult female shot by the brothers Watkins on November 29, 1910, at Yahuar Mayo, Sierra de Carabaya, southern Peru (Munich Museum) and two males obtained by S. Briceño on October 20, 1902, at Mérida, Venezuela (Hungarian National Museum, Budapest).

<sup>2</sup> I cannot see in *V. flavoviridis* anything but a well-marked race of the Red-eyed Vireo. While very different from the North American form, it is closely connected with certain specimens of *V. v. viridior* as to color characters. The Mexican form (*flavoviridis*), I admit, is rather larger than any of the "*chiri*" races, but the gap is completely bridged by the smaller *V. v. insulanus*, the latter having about the same proportions as *V. v. viridior*. There is apparently less variation in the wing formula in the races of *flavoviridis*, the first primary falling always between the fourth and fifth. Numerous specimens of the "*chiri*" group, however, show the same shape of the wing. It will also be remembered that no other vireo of this group, neither the Red-eyed nor any of the "*chiri*" forms, breeds where a representative of the "*flavoviridis*" section occurs during the nesting period.

p. 375, 1859—Playa Vicente, Oaxaca; Sclater and Salvin, *Ibis*, 1859, p. 12—Guatemala; Sclater, *Cat. Coll. Amer. Bds.*, p. 44, 1862—Guatemala; Lawrence, *Ann. Lyc. Nat. Hist. N. Y.*, 7, p. 323, 1861—Panama Railroad; idem, *l.c.*, 9, p. 96, 1868—San José and "Aterias" [=Atenas], Costa Rica; idem, *Mem. Bost. Soc. N. H.*, 2, p. 272, 1874—Mazatlan and Rosario, Mexico; idem, *Bull. U. S. Nat. Mus.*, 4, p. 17, 1876—Tehuantepec (Tapana, Santa Efigenia); Baird, *Rev. Amer. Bds.*, 1, p. 336, 1866—part, Monterey, Rosario, near Colima, Mexico, and San José, Costa Rica; Sumichrast, *Mem. Bost. Soc. N. H.*, 1, p. 547, 1869—neighborhood of Orizaba, Vera Cruz; (?) Salvin, *Proc. Zool. Soc. Lond.*, 1867, p. 137—Santa Fé and Cordillera de Tolé, Veragua; Frantzius, *Journ. Orn.*, 17, p. 295, 1869—Costa Rica; (?) Salvin, *Proc. Zool. Soc. Lond.*, 1870, p. 184—Mina de Chorchá and Bugaba, Chiriquí, and Chitrá, Veragua; Taczanowski, *l.c.*, 1874, p. 509—Monterico, Peru; Boucard, *l.c.*, 1878, p. 53—San José, Costa Rica; idem, *Ann. Soc. Linn. Lyon*, (n.s.), 25, p. 41, 1878—Guatemala; Merrill, *Proc. U. S. Nat. Mus.*, 1, p. 125, 1878—Fort Brown, Texas (Aug. 23); Nutting, *l.c.*, 5, p. 391, 1882—La Palma de Nicoya, Costa Rica; Taczanowski, *Proc. Zool. Soc. Lond.*, 1882, p. 7—Yurimaguas, Peru; idem, *Orn. Pér.*, 1, p. 445, 1884—Monterico and Yurimaguas, Peru; Dearborn, *Field Mus. Nat. Hist., Orn. Ser.*, 1, p. 124, 1907—Mazatenango, Guatemala; Berlioz, *Bull. Mus. Hist. Nat.*, Paris, 34, p. 73, 1928—San José, Ecuador.

*Vireo flavoviridis* Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 1, p. 189, 1881—part, excl. Tres Marias Islands; Gadow, *Cat. Bds. Brit. Mus.*, 8, p. 295, 1883—Guajango (Peru), Rio Napo (Ecuador), (?) Veragua, (?) Panama, and Bolivia; Merriam, *Bull. Nutt. Orn. Cl.*, 8, p. 213, 1883—Godbout, Quebec (May 13); Zeledón, *Anal. Mus. Nac. Costa Rica*, 1, p. 108, 1887—Costa Rica (San José, Alajuéla, Tambor de Alajuéla) and (?) Panama; Price, *Auk*, 5, p. 210, 1888—Riverside, California (Oct. 1); Cherrie, *Auk*, 7, pp. 329, 335, 1890—San José, Costa Rica (habits, nest and eggs); Jouy, *Proc. U. S. Nat. Mus.*, 16, p. 778, 1893—Barránca Ibarra, Jalisco; Underwood, *Ibis*, 1896, p. 434—Miravalles, Costa Rica; Allen, *Bull. Amer. Mus. N. H.*, 13, p. 173, 1900—Bonda, Santa Marta, Colombia; Bangs, *Proc. New Engl. Zool. Cl.*, 3, p. 58, 1902—Boquete and Bugaba, Chiriquí; Berlepsch and Stolzmann, *Ornis*, 13, p. 107, 1906—Huaynapata and Rio Cadena, Peru.

*Vireosylva flavoviridis flavoviridis* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 144, 1904 (monog.); Miller, *Bull. Amer. Mus. N. H.*, 21, p. 366, 1905—Escuinapa, southern Sinaloa (with nest); Cole, *Bull. Mus. Comp. Zool.*, 50, p. 136, 1906—Chichen Itza, Yucatan; Carriker, *Ann. Carnegie Mus.*, 6, p. 784, 1910—Costa Rica (habits); Peters, *Auk*, 30, p. 377, 1913—Camp Mengel, Quintana Roo; Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 539, 1917—Chicoral, Colombia; idem, *l.c.*, 55, p. 586, 1926—below San José and lower Sumaco, eastern Ecuador; Todd and Carriker, *Ann. Carnegie Mus.*, 14, p. 434, 1922—Bonda, Buritaca, Mamatoco, Gaira, Punto Caiman, Tucurínca, and Fundación, Colombia; Bangs and Peters,

<sup>1</sup> The measurements given for this specimen (wing, 72; tail, 48) are remarkably small.

Bull. Mus. Comp. Zool., 67, p. 482, 1927—Presidio, Vera Cruz; idem, l.c., 68, p. 399, 1928—Chivelá, Oaxaca.

*Vireo flavoviridis flavoviridis* Griscom, Bull. Mus. Comp. Zool., 69, p. 183, 1928—Cana, Panama; Peters, l.c., 71, p. 333, 1931—Changuinola, Panama; idem, Auk, 48, p. 576, 1931 (crit., range, migration); Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1931—Rio Frio, Magdalena, Colombia; Griscom, l.c., 72, p. 366, 1932—Permé, Panama; idem, Bull. Amer. Mus. N. H., 64, p. 315, 1932—Guatemala.

*Phyllomanes flavoviridis* Cabanis, Journ. Orn., 9, p. 93, 1861—Costa Rica.

*Vireosylva insulanus* (not *Vireo insulanus* Bangs, 1902) Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 154, 1905—part, Saboga Island, Pearl Islands (April).

**Range.**—Breeds in Mexico, from Sinaloa, Nuevo Leon, and Tamaulipas, south on the Pacific coast to northwestern Costa Rica and on the Caribbean slope to eastern Guatemala; migrates through southern Central America and Colombia, and winters in upper Amazonia (eastern Ecuador; Iquitos, Guajango, Yurimaguas, Monterico, Rio Huaynapata, Rio Cadena, eastern Peru; Tres Arroyas, Bolivia). Accidental at Brownsville, Texas (Aug. 23, 1877); Riverside, California (Oct. 1 [=Sept. 29], 1887); and Godbout, Quebec (May 13, 1883).

12: Mexico (Valles, San Luis Potosi, 1; San Felipe, Yucatan [June 4, 1893], 1); Guatemala (Mazatenango, 1; unspecified, 1); Costa Rica (Las Cañas, 5; Bebedero, 1; San José, 1); Bolivia (Tres Arroyas [Feb. 24, 1915], 1).<sup>1</sup>

### ***Vireo virescens forreri* Madarász.<sup>2</sup> FORRER'S VIREO.**

*Vireo forreri* Madarász, Termesz. Füzet., 9, p. 85, pl. 6, 1885—Tres Marias Islands, western Mexico (type in Hungarian National Museum, Budapest).

*Vireo flavoviridis forreri* Nelson, N. Amer. Fauna, 14, p. 54, 1899—Tres Marias Islands (crit., habits); Peters, Auk, 48, p. 581, 1931—Tres Marias (crit.).

*Vireosylva flavoviridis forreri* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 146, 1904—Tres Marias (monog.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 310, 1926—Maria Madre and Maria Magdalena Islands.

*Vireo flavoviridis* (not of Cassin) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 189, 1881—part, Tres Marias.

<sup>1</sup> Additional material examined.—Costa Rica: Bebedero, 7 (including a fledgling, taken June 26); San José, 11.—Colombia: "Bogotá," 5.—Ecuador: Sarayacu, 1.

<sup>2</sup> *Vireo virescens forreri* Madarász: Most similar to *V. v. flavoviridis*, but even larger; superciliary streak obsolete; dusky border of the pileum merely suggested. Wing of (three) adult males, 83–87.

As pointed out by Mr. Peters, Forrer's Vireo is probably migratory, but, if so, dates of migration and winter home are unknown.

*Range*.—Tres Marias Islands (Madre and Maria Magdalena), off western Mexico.

**\**Vireo virescens insulanus* Bangs.<sup>1</sup> SOUTHERN YELLOW-GREEN VIREO.**

*Vireo insulanus* Bangs, Proc. New Engl. Zool. Cl., 3, p. 73, 1902—San Miguel Island, Gulf of Panama (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 343, 1930).

*Vireosylva insulanus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 147, 1904—San Miguel Island; Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 154, 1905—part, San Miguel, Pearl Islands.

*Vireosylva flavoviridis insulanus* Rendahl, Ark. Zool., 13, No. 4, p. 43, 1920—Viveros Island (crit.).

*Vireo flavoviridis insulanus* Peters, Auk, 48, p. 582, 1931—Pearl Islands, Canal Zone, and Térraba Valley, Costa Rica (monog.).

*Vireo chivi agilis* (not *Lanius agilis* Lichtenstein) Bangs, Auk, 18, p. 30, 1901—San Miguel Island.

*Vireosylva flavoviridis flavoviridis* (not of Cassin) Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 220, 1906—savanna of Panama (May); Bangs, 24, p. 305, 1907—Boruca, Paso Real and Barránca, southwestern Costa Rica; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 223, 1922—Mount Sapo, Darien; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Agua Clara, Panama; Hallinan, Auk, 41, p. 324, 1924—Juan Mina, Balboa, and Corozal, Panama.

*Vireo flavoviridis* Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 136, 1893—Lagarto, Térraba, and Buenos Aires, Costa Rica.

*Vireosylva flavoviridis* Baird, Rev. Amer. Bds., 1, p. 336, 1866—part, Isthmus of Panama (Jan. 25); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Punta de Sabana, Darien (July).

*Range*.—Breeds in the Térraba Valley, southwestern Costa Rica, in the Canal Zone (chiefly on the Pacific side) and probably other suitable localities on the Pacific coast of Panama, as well as on San Miguel Island, Pearl Archipelago; probably migratory, but winter home unknown.

1: Panama.

<sup>1</sup> *Vireo virescens insulanus* Bangs: Similar to *V. v. flavoviridis*, but smaller, and dusky lateral border to pileum obsolete. Wing, 74–79, (female) 71–78.

In a very able paper, Mr. Peters has worked out the range and migration of this smaller, southern representative of the Yellow-green Vireo, which replaces its northern ally in southwestern Costa Rica, Panama, and on San Miguel Island. It is supposed to be migratory, though we know yet nothing about where it spends the winter months.

*Additional material examined*.—Costa Rica: Buenos Aires, 2; Lagarto, 3; Térraba, 2.



**\*Vireo virescens chivi (Vieillot).<sup>1</sup> CHIVI VIREO.**

*Sylvia chivi* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 174, 1817—based on "Gaviero" Azara, No. 152, Paraguay.

*Lanius agilis* Lichtenstein, Verz. Doubl. Berliner Mus., p. 49, 1823—Bahia (type in Berlin Museum).

*Thamnophilus agilis* Spix, Av. Bras., 2, p. 25, pl. 34, fig. 1, 1825—no locality indicated (spec. lost; cf. Hellmayr, Abhandl. 2. Kl. Bayr. Akad. Wiss., 22, No. 3, p. 656, 1906).

*Vireo bartramii* Swainson, in Richardson, Faun. Bor.-Amer., 2, "1831," p. 235, Feb., 1832—Brazil and "South Carolina," errore (type from Brazil, latitude 12° S., in coll. of Swainson, now in University Museum, Cambridge, England).

*Curruca olivacea* Lesson, Voy. Coquille, Zool., 1, (2), livr. 15, p. 664, April, 1830—"L'île de Sainte-Catherine, Bresil" (type in Paris Museum examined).

*Muscicapa agilis* Wied, Beitr. Naturg. Bras., 3, (2), p. 795, 1831—Brazil (nesting habits).

*Phyllomanes agilis* Burmeister, Syst. Uebers. Th. Bras., 3, p. 108, 1856—Brazil.

*Vireo virescens* (not of Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 9, 1837—Corrientes and Bolivia (spec. in Paris Museum examined).

*Vireo olivaceus* (not *Motacilla olivacea* Linnaeus) d'Orbigny, Voy. Amér. Mérid., Ois., p. 162, 1838—Corrientes and Bolivia (Moxos, Chiquitos, Yungas, Yuracares).

*Vireosylb(i)a chivi* Baird, Rev. Amer. Bds., 1, p. 337, 1866—Bahia and Vermejo River, Paraguay; Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 160—Buenos Ayres; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 439—Lagôa Santa, Minas Geraes, and Rio de Janeiro (Rio and Aldea da Pedra); Berlepsch, Journ. Orn., 21, p. 232, 1873—Blumenau, Santa Catharina; idem and Ihering, Zeits. Ges. Orn., 2, p. 115, 1885—Taquara, Rio Grande do Sul; Berlepsch, Journ. Orn., 35, p. 5, 1887—Lambaré, Paraguay; Sclater and Salvin, Arg. Orn., 1, p. 22, 1888—Buenos Aires; Frenzel, Journ. Orn., 39, p. 118, 1891—southeastern Cordoba; Kerr, Ibis, 1892, p. 123—Fortín Page and Fortín Nueve, lower Pilcomayo; Holland, Ibis, 1895, p. 214—Santa Elena, Entre Rios; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 3, 1895—Colonia Risso, Paraguay, and Resistencia, Chaco Austral, Argentina; idem,

<sup>1</sup> I fully concur with Mr. Zimmer (Field Mus. Nat. Hist., Zool. Ser., 17, p. 414, 1930) in considering *V. chivi* to be conspecific with the Red-eyed Vireo. Neither general coloration nor pattern offer specific differences, though in fresh plumage the North American bird is distinguishable by its dull-colored ("washed out") upper parts and very pale yellowish under wing and under tail coverts. The shorter first primary of the South American races is very nearly bridged by individual variation, although in North American birds this feather obviously is never shorter than the fifth, which frequently obtains in the forms of tropical America. However, as insisted upon by Mr. Zimmer, certain specimens of the two continents run very close in that respect.

- i.c.*, 12, No. 292, p. 5, 1897—San Francisco, Bolivia; Lillo, *Anal. Mus. Nac. Hist. Nat. Buenos Aires*, 8, p. 174, 1902—Tucumán; Baer, *Ornis*, 12, p. 215, 1904—Tapia, Tucumán; Lillo, *Rev. Letr. Cienc. Soc.*, 3, p. 40, 1905—Tucumán; Grant, *Ibis*, 1911, p. 89—Paraguay (Villa Franca), Corrientes (Bella Vista, Goya), and Entre Ríos (Santa Elena); Bertoni, *Faun. Parag.*, p. 61, 1914—Alto Paraná; Dinelli, *El Hornero*, 3, p. 253, 1924—Prov. Tucumán (eggs descr.).
- Vireosylva chivi chivi* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 132, 1904—Paraguay, Argentina, and southern Brazil; Dabbene, *Anal. Mus. Hist. Nat. Buenos Aires*, 18, p. 365, 1911—Cordoba, Tucumán, Pilcomayo, and Buenos Aires (Barracas al Sud, Tigré); idem, *El Hornero*, 1, p. 243, 1919—Isla Martín García; Pereyra, *i.c.*, 3, p. 170, 1923—San Isidro, Buenos Aires; Chapman, *Bull. U. S. Nat. Mus.*, 117, p. 105, 1921—Santa Ana, Idma, and San Miguel Bridge, Urubamba, Peru; idem, *Bull. Amer. Mus. N. H.*, 55, p. 586, 1926—below San José, Ecuador, and Chinchipe Valley, Peru (crit.); Sztolcman, *Ann. Zool. Mus. Pol. Hist. Nat.*, 5, p. 184, 1926—Marechal Mallet, Rio Claro, Faz. Firmiano, Durski, etc., Paraná; Holt, *Bull. Amer. Mus. N. H.*, 57, p. 313, 1928—Monte Serrat, Itatiaya; Laubmann, *Wissens. Erg. Deuts. Gran Chaco Exp.*, Vögel, p. 308, 1930—Argentina (Tapikiolé, Formosa) and Bolivia (San José, Santa Cruz; Villa Montes and Fortín Esteros, Tarija); Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 333, 1930—Urucúm, Belvedere de Urucúm, Tapirapoan, and Utiarity, Matto Grosso.
- Phyllomanes chivi* Cabanis, *Journ. Orn.*, 22, p. 83, 1874—Cantagallo, Rio; idem, *i.c.*, 26, p. 195, 1878—Sierra de Cordoba; Stempelmann and Schulz, *Bol. Acad. Nac. Cienc. Cordoba*, 10, p. 399, 1890—Cordoba.
- Vireo chivi* Gadow, *Cat. Bds. Brit. Mus.*, 8, p. 295, 1883—part; Berlepsch, *Journ. Orn.*, 37, p. 294, 1889—Yurimaguas, Peru; Allen, *Bull. Amer. Mus. N. H.*, 2, p. 79, 1889—Mapiri, Bolivia; idem, *i.c.*, 3, p. 345, 1891—Chapada, Matto Grosso; Ihering, *Ann. Est. Rio Grande do Sul*, 16, p. 117, 1899—Mundo Novo, Rio Grande do Sul; idem, *Rev. Mus. Paul.*, 3, p. 136, 1899—Piracicaba and Iguapé, São Paulo; Euler, *i.c.*, 4, p. 15, 1900 (nesting habits); Ihering, *i.c.*, 4, pp. 152, 204, 1900—Cantagallo (nesting habits); idem, *Cat. Faun. Braz.*, 1, p. 335, 1907—part, São Paulo (Ypiranga, Itapura, Bebedouro, Rio Feio, Iguapé, Ubatuba, Piquete, Rincão), Matto Grosso (Porto da Faya), and La Plata; Berlepsch and Stolzmann, *Ornis*, 13, p. 76, 1906—Santa Ana, Urubamba, Peru; Hellmayr, *Nov. Zool.*, 15, p. 22, 1908—Rio Araguaya, Goyaz; Hartert and Venturi, *i.c.*, 16, p. 167, 1909—Buenos Aires and Chaco (eggs descr.); Chubb, *Ibis*, 1910, p. 612—Sapucay, Paraguay; Dabbene, *Bol. Soc. Physis*, 1, p. 353, 1914 (range); Ménégau, *Rev. Franç. d'Orn.*, 1917, p. 85—Poconé, Matto Grosso; Giacomelli, *El Hornero*, 3, p. 68, 1923—La Rioja; Marelli, *Mem. Min. Obr. Publ. for 1922-23*, p. 654, 1924—Prov. Buenos Aires; Snethlage, *Bol. Mus. Nac. Rio de Janeiro*, 2, No. 6, pp. 41, 59, 1926—Ceará and Maranhão (Anil, Tury-assú).
- Vireo chivi chivi* Hellmayr, *Nov. Zool.*, 28, p. 193, 1921—Mojos and Corrientes (crit.); Wetmore, *Bull. U. S. Nat. Mus.*, 133, p. 367, 1926—Paraguay (Cerro Lorito, near Puerto Pinasco), Uruguay (San Vicente, Rio

Cebollati), and Tucumán (Tapia); Friedmann, Bull. Mus. Comp. Zool., 68, p. 216, 1927—Concepción, Tucumán.

*Vireosylva agilis* Baird, Rev. Amer. Bds., 1, p. 338, 1866—part, Buenos Aires and southern Brazil; Pelzeln, Orn. Bras., 2, p. 73, 1868—part, Rio de Janeiro, Registro do Sai, Ypanema, Ytararé, and Curytiba (spec. examined); Hamilton, Ibis, 1871, p. 302—São Paulo.

*Vireosylva chiri agilis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 132, 1904—part, Bahia and Matto Grosso; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 260, 1929—Maranhão (São Luiz, Rosario, Tranqueira, Barra do Corda, Codó), Piahy (Arára, Parnaguá, Olho d'Água), and Ceará (Juá).

*Vireosylva olivacea* Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—Bolivia (Moxos, Chiquitos, Yungas, Yuracares, Guanai).

*Vireo olivaceus chiri* Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 79, 1910—Bahia (Bahia, Barra, Barroção on the Rio Preto) and Piahy (Parnaguá, Olho d'Água, Oro).

*Vireosylva virescens chiri* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 413, 1930—Vista Alegre and Huachipa, Dept. Huánuco, Peru (crit.).

*Vireosylva chiri griseibarbatus* (not of Berlepsch and Taczanowski) Bangs and Noble, Auk, 35, p. 457, 1918—Bellavista and Perico, northern Peru.

**Range.**—Northern Argentina, south to La Rioja, Cordoba, and Buenos Aires; Uruguay; Paraguay; Brazil, north to Matto Grosso, Goyaz, Maranhão, and Ceará; Bolivia; eastern Peru<sup>1</sup> and eastern Ecuador.<sup>2</sup>

<sup>1</sup> Various Peruvian records cannot be properly placed without reexamination of the specimens upon which they were based, as the respective authors did not clearly distinguish between the resident breeding form (*V. v. chiri*) and North American migrants (*V. v. virescens*). The principal references are as follows:

*Vireosylva agilis* Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper Ucayali; idem, l.c., 1867, p. 749—Chyavetas; idem, l.c., 1867, p. 977—Pebas.

*Vireosylva olivacea* Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 258—upper Ucayali, Chyavetas, Chamicuros, Pebas; idem, l.c., 1876, p. 16—Maranura and Huio, Urubamba Valley; Taczanowski, l.c., 1879, p. 224—Guajango, Rio Marañón; idem, l.c., 1880, p. 192—Callacate; idem, l.c., 1882, p. 7—Huambo; idem, Orn. Pér., 1, p. 443, 1884—Peruvian localities.

<sup>2</sup> Further subdivision of this form seems hardly practicable. Birds from southern Brazil, as far north as Rio de Janeiro, agree perfectly with a series from Misiones, Paraguay, and the Chaco region. Peruvian and Bolivian specimens are possibly slightly duller above and less washed with greenish along the sides, thus displaying a slight tendency towards the characters of *V. v. caucacae*. Two adults from the Rio Chinchipe, northwestern Peru, appear to me decidedly referable to the present form and not to *V. v. griseobarbatus*, with which birds of that region were identified by Bangs and Noble. In northeastern Brazil, from Bahia northward, these vireos are apt to become somewhat brighter in coloration, and while a good many are indistinguishable from southern examples, others run very close to the Amazonian race (*V. v. solimõesensis*).

**Additional material examined.**—Argentina, Prov. Buenos Aires: La Plata, 1; Barracas al Sud, 1; Tigré, 1; Corrientes, 1; La Urbana, Formosa, 1; Tacaaglé, Formosa, 1.—Bolivia: Fortín Esteros, Rio Pilcomayo, Prov. Tarija, 2; Villa

40: Argentina, Misiones (Rio Paraná, 3; Caraguatay, Rio Paraná, 3; El Dorado, 3; Puerto Segundo, 2; Iguazú, 2); Paraguay (Villa Rica, 1); Bolivia (Buena Vista, Dept. Santa Cruz, 1; Todos Santos, Rio Espirito Santo, 1); Peru (San Ramón, Chanchamayo, 1; Huachipa, Dept. Huánuco, 2; Vista Alegre, Dept. Huánuco, 1; Hacienda Limón, ten miles west of Balsas, 2); Brazil, Bahia (Santo Amaro, 3; Macaco Secco, near Andarahy, 2); Matto Grosso (Chapada, 2); Ceará (Juá, near Iguatú, 1); Piauhý (Arára, 2); Maranhão (Barra do Corda, 2; Codó, Cocos, 1; Tranqueira, Alto Parnahyba, 1; Rosario, 2; São Luiz, 2).

**\*Vireo virescens caucæ (Chapman).<sup>1</sup> CAUCA VIREO.**

*Vireosylva chivi caucæ* Chapman, Bull. Amer. Mus. N. H., 31, p. 159, 1912—Cali, Cauca, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 539, 1917—tropical zone of the Cauca Valley, Colombia.

*Vireosylva virescens* (not *Vireo virescens* Vieillot) Sclater, Proc. Zool. Soc. Lond., 23, p. 151, 1855—Bogotá.

*Vireosylva agilis* (not *Lanius agilis* Lichtenstein) Sclater, Cat. Coll. Amer. Bds., p. 43, 1862—part, Bogotá.

*Vireo caucæ caucæ* Todd, Auk, 48, p. 412, 1931—western Colombia (Cauca Valley).

**Range.**—Tropical zone of western Colombia (western Andes; Dagua Valley; Cauca Valley; “Bogotá”).

2: Colombia (“Bogotá,” 2).

Montes, 5; San José, Santa Cruz, 1; Mojos, 1.—Brazil: Ilha de Santa Catharina, 1; Ararangua, Santa Catharina, 2; Roça Nova, Serra do Mar, Paraná, 6; Curytiba, Paraná, 2; Ypanema, São Paulo, 4; Itararé, São Paulo, 1; Registre do Sai, Rio, 1; Bahia, 5; Barra, Bahia, 1; Rio Preto, 1; Parnaguá, Piauhý, 2; Oro, Piauhý, 1.

<sup>1</sup> *Vireo virescens caucæ* (Chapman): Nearest to *V. v. chivi*, but back even duller, less greenish; superciliaries whitish instead of buffy; cheeks and auriculars dingy grayish rather than ecru drab; sides and flanks barely shaded with greenish. Wing, 67–71; tail, 47–53; bill, 12½–14.

This appears to be a well-marked race, most closely resembling *V. v. chivi*, but of still duller coloration. From its geographical neighbor, *V. v. griseobarbatus*, with which it agrees in small bill and whitish superciliaries, it may be separated by the darker (mouse gray), posteriorly less defined cap; much darker (dull citrine to olive citrine instead of citrine to near warbler green) back; dingy grayish instead of yellowish citrine cheeks and auriculars; much paler, marguerite to primrose yellow instead of barium to citron yellow, under wing and under tail coverts; as well as by having hardly any greenish on the sides of the body.

The range appears to be more extensive than was hitherto supposed, since two native “Bogotá” skins agree in all essential characters with a topotypical series.

**Additional material examined.**—Colombia: Las Lomitas, western Andes, 1; Los Cisneros, Rio Dagua, 2; Caldas, Rio Dagua, 1; Cali, 1; Media Luna, Cauca, 1.

**Vireo virescens griseobarbatus** (Berlepsch and Taczanowski).<sup>1</sup>  
WEST ECUADORIAN VIREO.

*Vireosylva(i)a chiri griseobarbata* (Berlepsch MS.) Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—Chimbo, Ecuador (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 159, 1927); Chapman, Bull. Amer. Mus. N. H., 55, p. 587, 1926—Esmeraldas, Manaví, Cuaque El Destino, Mindo, La Plata Island, Chongon Hills, Puna Island, and Pullango, Ecuador (crit.).

*Vireo griseobarbatus* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Intac, Babahoyo, Vines, and Balzar (crit.).

*Vireosylva agilis* (not *Lanius agilis* Lichtenstein) Sclater, Proc. Zool. Soc. Lond., 28, pp. 64, 273, 1860—Pallatanga and Babahoyo; idem, Cat. Coll. Amer. Bds., p. 43, 1862—part, Pallatanga.

*Vireosylva chiri* (not *Sylvia chiri* Vieillot) Baird, Rev. Amer. Bds., 1, p. 337, 1866—part, "Quito" (Jameson).

*Vireo chiri* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—La Concepción, Chota; Goodfellow, Ibis, 1901, p. 316—San Nicolas.

*Vireo flavoviridis* (not of Cassin) Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 70, 1911—Santo Domingo.<sup>2</sup>

*Vireo chiri vividior* (not of Hellmayr and Seilern) Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 77, 1922—Gualea.

**Range.**—Tropical zone of western Ecuador, from Esmeraldas to the Peruvian boundary.

**\*Vireo virescens solimoënsis** Todd.<sup>3</sup> AMAZONIAN VIREO.

*Vireo caucæ solimoënsis* Todd, Auk, 48, p. 412, 1931—São Paulo de Olivença, Rio Solimões, Brazil (type in Carnegie Museum).

<sup>1</sup> *Vireo virescens griseobarbatus* (Berlepsch and Taczanowski): Resembles *V. v. vividior* in bright coloration (clear gray pileum; bright citrine to warbler green back; barium yellow to citron yellow under wing and under tail coverts; yellowish citrine cheeks and auriculars, etc.), but differs by decidedly smaller size, particularly shorter and slenderer bill, and by having the greenish yellow suffusion on the sides of the body generally more extended. Wing, 66–70, rarely 71–72; tail, 47–53; bill, 12½–13½.

In spite of the doubts cast by Mr. Todd (Auk, 48, p. 411, 1931) on its validity, I find little difficulty in separating the west Ecuadorian form by its smaller size and more extensively greenish yellow flanks from the Caribbean *V. v. vividior*, whereas the distinctness from the Amazonian race, *V. v. solimoënsis*, is much less conspicuous.

**Material examined.**—Ecuador: Esmeraldas, 3; Paramba, 7; Lita, 1; Carondelet, 4; Pambilár, 2; coast of Manaví, 1; Cuaque El Destino, 1; Isla La Plata, 1; Chimbo, 1; Chongon Hills, 1; Portovelo, 2; Pullango, 1.

<sup>2</sup> Mr. Berlioz, who very kindly reexamined the specimen at my request, informs me that it is in every respect a typical individual of the race *griseobarbatus*.

<sup>3</sup> *Vireo virescens solimoënsis* Todd: Similar in coloration to *V. v. vividior*, but decidedly smaller; closer still to *V. v. griseobarbatus* and agreeing with it in propor-

*Vireosylvia agilis* (not *Lanius agilis* Lichtenstein) Sclater, Cat. Coll. Amer. Bds., p. 43, 1862—part, Pará; Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 569—Pará; Pelzein, Orn. Bras., 2, p. 73, 1868—part, Borba, Rio Madeira, and "Barra" [= Manáos] (spec. examined); Allen, Bull. Essex Inst., 8, p. 78, 1876—Rhomes, sixty miles from Santarém.

*Vireo chivi agilis* Chapman and Riker, Auk, 7, p. 266, 1890—Santarém.

*Vireosylva chivi agilis* Naumburg, Bull. Amer. Mus. N. H., 60, p. 334, 1930—Barão Melgaço, northern Matto Grosso (crit.).

*Vireosylvia olivacea* (not *Motacilla olivacea* Linnaeus) Layard, Ibis, 1873, p. 377—Pará.

*Vireo chivi* (not *Sylvia chivi* Vieillot) Gadow, Cat. Bds. Brit. Mus., 8, p. 295, 1883—part; Ihering, Rev. Mus. Paul., 6, p. 432, 1905—Rio Jurúá; idem, Cat. Faun. Braz., 1, p. 335, 1907—part, Pará, Santarém, and Rio Jurúá; Hagmann, Zool. Jahrb. (Syst.), 26, p. 25, 1907—Mexiana; Snethlage, Journ. Orn., 56, p. 521, 1908—Arumatheua, Rio Tocantins; Hellmayr, Nov. Zool., 17, p. 268, 1910—Jamarysinho, Rio Machados; idem, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, pp. 87, 118, 1912—Pará and Mexiana; Snethlage, Bol. Mus. Goeldi, 8, p. 474, 1914—Pará, Mosqueiro, Providencia, Rio Tocantins (Cameté, Baião, Arumatheua), Xingú (Victoria), Tapajóz (Boim, Goyana), Purús (Bom Lugar), Mexiana, Monte Alegre, Rio Jary (S. Antonio da Cachoeira), Rio Jamundá (Faro); Beebe, Zoologica (N.Y.), 2, p. 96, 1916—Utinga, Pará; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 172, 1928—Pará.

*Vireo chivi* subsp. Hellmayr, Nov. Zool., 14, p. 42, 1907—Teffé, Rio Solimões.

*Vireo caucæe vividior* (not *V. chivi vividior* Hellmayr and Seilern) Todd, Auk, 48, p. 412, 1931—part, Amazon Valley.

tions, but distinguishable by paler yellow under tail coverts and less greenish yellow suffusion on sides and flanks. Wing, 66–70, (female) 61–66; tail, 47–53, (female) 42–48; bill, 11–13.

Mr. Todd distinguished this form on account of its smaller size, basing his separation upon a series from the Rio Solimões, while specimens from the lower stretches of the Amazon were referred by him to *V. v. vividior*. I fail to see, however, any difference whatsoever between birds from the Rio Solimões on one side and those from Manacapurú and the Rio Tapajóz on the other. They agree precisely in coloration and size, differing by their smaller dimensions from *V. v. vividior*, of Venezuela and Trinidad. In the same paper, Mr. Todd claims that these small, bright-colored birds are specifically distinct from *V. v. chivi*, since both forms have "actually been taken together at Manacapurú and localities on the Rio Tapajóz, as shown by specimens in the collection of the Carnegie Museum." Thanks to Mr. Todd's kindness, I have been enabled to examine part of the material upon which his conclusions were based. While admitting that certain individuals, notably two from Manacapurú, two others from Santarém, and one from Mirirituba, Rio Tapajóz, are strikingly like *chivi* from southern Brazil and Paraguay, I find several others decidedly intermediate, and as similar variation takes place within the range of *V. v. vividior*, e.g. in Trinidad, I cannot believe that the differences denote specific distinctness, and would rather attribute them to an unusual amount of variability, unless those dull-colored examples be migrants from more southern districts. Altogether, it seems unlikely that there is more than one specific group of these vireos in America.

*Additional material examined.*—Brazil: Tonantins, Rio Solimões, 6; São Paulo de Olivença, 2; Teffé, Rio Solimões, 3; Marrecão Island, Manacapurú, 1; Manacapurú, 5; Manáos, 1; Obidos, 2; Santarém, 10; Mirirituba, Rio Tapajóz, 2; Villa Braga, 1; Itaituba, 1.

*Range*.—Northern Brazil, in the valley of the Amazon, from Pará to the Rio Solimões, south to the Rio Juruá, Rio Purús, and northern Matto Grosso (Barão Melgaço).

10: Brazil (Itacoatiará, 2; Manáos, 8).

**\*Vireo virescens griseolus (Todd).<sup>1</sup> GRAY-BELLIED VIREO.**

*Vireosylva chivi griseola* Todd, Proc. Biol. Soc. Wash., 37, p. 124, 1924—Pied Saut, French Guiana (type in Carnegie Museum).

*Vireosylva chivi* (not *Sylvia chivi* Vieillot) Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 180, 1904—St. Georges d'Oyapock, French Guiana; Berlepsch, Nov. Zool., 15, p. 314, 1908 (ex Ménégau).

*Range*.—French Guiana and apparently some of the adjacent parts of northern Brazil (Rio Branco).

1: Brazil (Serra Grande, Rio Branco, 1).

**\*Vireo virescens vividior Hellmayr and Seilern.<sup>2</sup> CARIBBEAN VIREO.**

<sup>1</sup> *Vireo virescens griseolus* (Todd): Exactly like *V. v. solimoënsis*, but under parts distinctly washed with pale grayish, in particular on foreneck, chest, and sides. Wing, 66–70, (female) 64–68; tail, 47–51; bill, 12–13.

I must confess that I am still a little doubtful whether *griseolus* and *solimoënsis* can be kept separate, although eight specimens from French Guiana are uniformly more grayish beneath than the large series from the Amazon Valley. My suspicions as to its validity are mainly caused by its singularly restricted habitat. Mr. Todd, it is true, gives its range as extending to the north bank of the Amazon. Against this I have only to say that ten specimens from that region (Itacoatiará and Manáos) in Field Museum, as well as two from Obidos, courteously loaned by Mr. Todd, are much whiter beneath and, as far as I can see, absolutely indistinguishable from a topotypical series of *V. v. solimoënsis*. A single (slightly worn) adult from the upper Rio Branco (Serra Grande) fits in, however, very well with the French Guianan birds. It seems to me that more material is yet required to establish the status of *V. v. griseolus*.

*Additional material examined*.—French Guiana: Cayenne, 4; Pied Saut, Oyapock, 2; Tamanoir, Mana River, 1; Saint-Jean-du-Maroni, 1.

<sup>2</sup> *Vireo virescens vividior* Hellmayr and Seilern: Similar to *V. v. chivi*, but considerably larger, with longer as well as heavier bill; pileum clearer gray, more strongly contrasted with color of back; upper parts, including wings and tail, externally brighter green, almost warbler green; superciliaries whitish, rarely tinged with buffy anteriorly; auriculars brighter, yellowish citrine; under tail coverts and axillaries brighter yellow. Wing, 70 (female) to 77 (male); tail, 50–57; bill, 14–16.

Though easily recognizable in a series, the color characters of this form are completely bridged by individual variation. Even in Trinidad, where the racial distinction is generally developed to the extreme, specimens are occasionally found that can hardly be separated from south Brazilian examples of *V. v. chivi*. Birds from British Guiana (*V. roraimae*) appear to be inseparable. They are fully as large as those from Trinidad and the Caribbean coast of Venezuela (wing, 72–76; tail, 52–57; bill, 15), but, together with birds from the upper Orinoco, they are not quite so bright green on the upper parts, the color approaching citrine rather than warbler green. A single adult from Marabitanas, on the Rio Negro, just beyond the Venezuelan border, seems likewise to be referable to *V. v. vividior*.

*Additional material examined*.—Trinidad: Caparo, 13; Valencia, 1.—Venezuela: plain of Cumaná, 20; Caura River, 3; Ciudad Bolívar, 1; Caicara, Rio Orinoco, 4; Mérida (Escorial, El Valle), 4.—British Guiana: Roraima, 4.—Brazil: Marabitanas, Rio Negro, 1.—Colombia: Mamatoco, 2.

- Vireo chiri vidior* Hellmayr and Seilern, Verh. Orn. Ges. Bay., 12, p. 315, Dec., 1913—Caparo, Trinidad (type in Munich Museum).
- Vireosylva chiri vidior* Todd and Carriker, Ann. Carnegie Mus., 14, p. 433, 1922—Bonda, Minca, Mamatoco, Dibulla, Don Diego, Santa Marta, La Tigrera, and Valencia, Colombia (crit., habits).
- Vireo caucæ vidior* Todd, Auk, 48, p. 412, 1931—part, Colombia and Venezuela.
- Vireo olivaceus* (not *Motacilla olivacea* Linnaeus) Léotaud, Ois. Trinidad, p. 250, 1866—Trinidad.
- Vireosylva agilis* (not *Lanius agilis* Lichtenstein) Pelzeln, Orn. Bras., 2, p. 73, 1868—part, Marabitanas, Rio Negro, Brazil (spec. examined).
- Vireo agilis* Salvin, Ibis, 1885, p. 204—Bartica Grove, Camacusa, and Roraima, British Guiana.
- Vireo chiri agilis* Chapman, Bull. Amer. Mus. N. H., 6, p. 27, 1894—Princes-town, Trinidad; Robinson, Proc. U. S. Nat. Mus., 18, pp. 678, 685, 1896—El Valle, Margarita Island, and La Guayra, Venezuela; Phelps, Auk, 14, p. 364, 1897—Cumanacoe and San Antonio, Venezuela; Bangs, Proc. Biol. Soc. Wash., 12, p. 142, 1898—Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 172, 1900—Bonda, Minca, Santa Marta, Quebrada Concha, and Cacagualito, Colombia; idem, l.c., 21, p. 293, 1905—Bonda (nest and eggs descr.); Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 177, 1901—La Guayra.
- Vireosylva chiri agilis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 132, 1904—part; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 249, 1909—Margarita Islands; Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 155, 1916—Orinoco region (nesting habits).
- Vireo chiri* (not *Sylvia chiri* Vieillot) Gadow, Cat. Bds. Brit. Mus., 8, p. 295, 1883—part; Berlepsch and Hartert, Nov. Zool., 9, p. 13, 1902—Caicara, Quiribana de Caicara, Altagracia, and Ciudad Bolivar, Rio Orinoco, and Suapure and La Pricion, Rio Caura, Venezuela; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 207, 1913—Cariquito, Venezuela; Beebe, Trop. Wild Life, 1, p. 135, 1917—Bartica Grove.
- Vireo chiri* subsp. Hellmayr, Nov. Zool., 13, p. 11, 1906—part, Caparo and Valencia, Trinidad.
- Vireosylva chiri* Cherrie, Mus. Brookl. Inst., Sci. Bull., 1, p. 357, 1908—Pointe Gourde and Carenage, Trinidad.
- Vireo roraimæ* Chubb, Bds. Brit. Guiana, 2, p. 393, 1921—Roraima, upper Takutu Mountains, Camacusa, Bartica, and Annai, British Guiana (type, from Roraima, in British Museum examined).
- Vireo chiri roraimæ* Chapman, Bull. Amer. Mus. N. H., 63, p. 113, 1931—Arabupu, Roraima (crit.).

*Range*.—Island of Trinidad; British Guiana; Venezuela, south to the Orinoco basin and the confines of Brazil (Marabitanas, upper Rio Negro); northern Colombia (Santa Marta region).

5: Trinidad (St. Ann's Valley, 2); Venezuela (Lake Valencia, 2); British Guiana (Caramang River, 1).



**\*Vireo virescens tobagensis subsp. nov.<sup>1</sup> TOBAGO VIREO.**

*Vireo gilvus* (not *Muscicapa gilva* Vieillot) Jardine, Ann. Mag. Nat. Hist., 20, p. 328, 1847—Tobago.

*Vireo chivi* (not *Sylvia chivi* Vieillot) Cory, Auk, 10, p. 220, 1893—Tobago.

*Vireo chivi* subsp. Hellmayr, Nov. Zool., 13, p. 11, 1906—part, Tobago.

*Range*.—Island of Tobago.

10: Tobago.

**Vireo gracilirostris Sharpe.<sup>2</sup> SLENDER-BILLED VIREO.**

*Vireo gracilirostris* Sharpe, Journ. Linn. Soc., (Zool.), 20, p. 478, 1890—Fernando Noronha Island (type in British Museum); Nicoll, Ibis, 1904, p. 38—Fernando Noronha; Ihering and Ihering, Cat. Faun. Braz., 1, p. 335, 1907—Fernando Noronha; Murphy, Auk, 32, p. 50, 1915—Fernando Noronha.

*Range*.—Fernando Noronha Island, off Brazil.

<sup>1</sup> *Vireo virescens tobagensis* subsp. nov.

*Type* from Tobago. No. 25100 Field Museum of Natural History. Adult male. Collected April 15, 1892, by W. W. Brown.

*Adult*.—Nearest to *V. v. vividior*, but on average larger with heavier though not always longer bill; back, including wings and tail externally, darker and duller, near dark citrine; auriculars and sides of neck less yellowish; axillars and under tail coverts decidedly paler, naphthalene yellow instead of barium yellow to Martius yellow; greenish suffusion of flanks paler as well as more restricted. Wing, 76–80, (female) 74–77; tail, 54–60; bill, 14–16.

Though heretofore united to the Caribbean form, *V. v. tobagensis* seems to be well worthy of separation. By the dull coloration of the upper parts and the pale yellow axillars and under tail coverts, it approaches *V. v. chivi*, but, besides being larger in all proportions, it may be distinguished from it by the much clearer gray, more strongly defined cap, whitish instead of buffy superciliaries, and paler, less buffy auriculars.

*Additional specimens examined*.—Tobago: Castare, 1; Mondland, 4.

<sup>2</sup> *Vireo gracilirostris* Sharpe: Upper parts nearly uniform grayish olive or deep grayish olive; wings and tail dusky hair brown, their external edges and the upper wing coverts of the same color as the back, the greater series of the latter exteriorly edged with paler; narrow, but very distinct superciliary streak (from the base of the bill to above the auriculars) and loreal region ivory yellow; sides of head and neck deep olive buff; under parts olive buff, somewhat paler on middle of throat and abdomen; under wing coverts apically passing into pale yellow; inner margin to remiges very pale yellowish (marguerite yellow); bill dusky, lower mandible pale brownish. Wing, 67, (female) 63; tail, 61, (female) 57; bill, 15.

This peculiar species is quite distinct from the continental *V. virescens chivi*, from which it differs, in addition to coloration, by proportionately much longer tail, very much slenderer as well as longer bill, and shorter first primary, the latter being either equal to, or a little longer than, the seventh. In general coloration it is indeed not unlike *V. magister*, though it may be readily distinguished from it by much shorter wings, slenderer tarsi, much smaller and slenderer bill, the absence of the dusky loreal spot and the grayish suffusion on the sides of the body, etc. I cannot believe that any genetic relationship really exists between these birds, whose superficial resemblance is most likely to be explained by parallelism of development. The origin of *V. gracilirostris* is quite obscure, it being the only land bird of strongly pronounced characters occurring on Fernando Noronha.

*Material examined*.—Fernando Noronha: 2 (British Museum and Vienna Museum).

**\*Vireo magister magister (Lawrence).<sup>1</sup> BELIZE VIREO.**

*Vireosylva magister* (Baird MS.) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 10, p. 20, 1871—Belize, British Honduras (type in U. S. National Museum).

*Vireosylva cinerea* Ridgway, Proc. Biol. Soc. Wash., 3, p. 22, 1885—Cozumel Island (type in U. S. National Museum).

*Vireo cinereus* Ridgway, Proc. U. S. Nat. Mus., 8, p. 565, 1885—Cozumel (full descr.).

*Vireo magister* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 191, 1881—Belize, British Honduras; Gadow, Cat. Bds. Brit. Mus., 8, p. 295, 1883—British Honduras; Salvin, Ibis, 1885, p. 188—Cozumel Island; idem, Ibis, 1888, p. 254—Holbox, Mugerres, Ruatan, and Bonacca (crit.); Ridgway, Proc. U. S. Nat. Mus., 10, p. 578, 1888—Ruatan Island (crit.).

*Vireosylva magister* Griscom, Amer. Mus. Nov., 235, p. 15, 1926—coast of Yucatan, opposite Cozumel Island (habits, crit.).

*Vireosylva magister magister* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 134, 1904—British Honduras and coast of Honduras (islands of Ruatan and Bonacca) (monog.).

*Vireosylva magister cinerea* Ridgway, l.c., p. 136, 1904—Yucatan, islands of Cozumel and Mugerres (monog.).

*Range*.—Coast of Yucatan, including the islands of Holbox, Mugerres, and Cozumel; British Honduras (Belize); and the islands of Ruatan and Bonacca, in the Gulf of Honduras.<sup>2</sup>

4: Yucatan (Mugerres Island, 2); Bay of Honduras (Ruatan Island, 1; Bonacca Island, 1).

**\*Vireo magister caymanensis Cory.<sup>3</sup> CAYMAN VIREO.**

*Vireo caymanensis* Cory, Auk, 4, p. 7, 1887—Grand Cayman (type in coll. of C. B. Cory, now in Field Museum); Ridgway, Proc. U. S. Nat. Mus., 10, p. 573, 1887—Grand Cayman; Cory, Auk, 5, p. 157, 1888—Grand Cayman; idem, Bds. W. Ind., p. 288, 1889—Grand Cayman; idem, Cat. W. Ind. Bds., pp. 17, 116, 129, 153, 1892—Grand Cayman; Nicoll, Bull. Brit. Orn. Cl., 14, p. 94, 1904—Grand Cayman; idem, Ibis, 1904, p. 580—Grand Cayman.

*Vireosylva caymanensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 136, 1904—"Cayman Islands"; Lowe, Ibis, 1909, p. 344—Grand Cayman (crit.); idem, Ibis, 1911, p. 154—"Cayman Islands"; English, Ibis, 1916, p. 28—Grand Cayman (nest and eggs).

<sup>1</sup> *V. magister* is nearly allied to, and may even prove to be conspecific with, *V. altiloquus*. The investigation of their interrelationship requires, however, more time than I can at present bestow upon this subject.

<sup>2</sup> After examining the extensive series in the British Museum, I fully concur with Mr. Griscom that *V. cinerea* is inseparable from *V. magister*. Even birds from Ruatan Island appear to be the same.

<sup>3</sup> *Vireo magister caymanensis* Cory merely differs from the typical race by its paler coloration and more whitish under parts.

*Vireosylva magister caymanensis* Bangs, Bull. Mus. Comp. Zool., 60, p. 314, 1916—Grand Cayman (crit.).

*Vireo magister caymanensis* Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 17, 1931—Grand Cayman (crit.).

*Range*.—Island of Grand Cayman, Greater Antilles.<sup>1</sup>

18: Grand Cayman.

**\**Vireo altiloquus altiloquus* (Vieillot).<sup>2</sup> JAMAICAN VIREO.**

*Muscicapa altiloqua* Vieillot,<sup>3</sup> Hist. Nat. Amér. Sept., 1, "1807," p. 67, pl. 38, 1808—Jamaica, Santo Domingo, etc. (the types in coll. of M. Dufresne, now in the Edinburgh Museum, are from St. Thomas; cf. Stenhouse, Nov. Zool., 35, p. 271, 1930).

*Vireo longirostris* Swainson, in Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 237, pub. Feb., 1832—part, Jamaica.

*Phyllomanes mystacalis* Cabanis, Arch. Naturg., 13, (1), p. 348, 1847—probably from one of the West Indian islands (type [alcoholic specimen] in the Museum of Anatomy, Berlin).

*Vireosylva mystacalis* Pelzeln, Orn. Bras., 2, p. 73, 1868—Borba, Rio Madeira (Feb. 10; spec. in Vienna Museum examined).

*Vireosylva frenata* Du Bus,<sup>4</sup> Bull. Acad. Roy. Sci., Lettr., Beaux Arts Belgique, 22, (1), p. 150, 1855—Ocaña, Colombia (type in Brussels Museum).

*Vireosylva atripennis* Lawrence, Proc. Acad. Nat. Sci. Phila., 15, p. 106, 1863—Sombrero Island (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); idem, Ann. Lyc.

<sup>1</sup> Cory's record of this species from Little Cayman and Cayman Brac (Auk, 6, p. 31, 1889), ignored by himself in his subsequent publications, is obviously a mistake. There are no specimens from either island in the collection of Field Museum.

<sup>2</sup> *Vireo altiloquus* and its races are apparently geographical representatives of *V. virens* in the West Indies and on islands in the Caribbean Sea, though the dusky submalar streak serves to separate them. It is, however, somewhat suggestive that this character is less pronounced in one of the forms (*V. a. grandior*), and perhaps the more logical course would be the combination of the Red-eyed Vireo and its West Indian allies in one "formenkreis."

<sup>3</sup> Messrs. Bangs and Penard (Bull. Mus. Comp. Zool., 67, p. 206, 1925) have clearly pointed out that *Motacilla calidris* Linnaeus (Syst. Nat., 10th ed., 1, p. 184, 1758), principally based upon "The American Nightingale" of Edwards (Nat. Hist. Bds., 3, p. 121, pl. 121, fig. inf.; Jamaica), is unrecognizable. I cannot agree, however, to their proposition to apply the name *olivaceus* to the present species for reasons given on page 180. *Turdus virens* Boddaert (Tabl. Pl. Enl., p. 16, 1783) and *Turdus hispaniolensis* Gmelin (Syst. Nat., 1, (2), p. 822, 1789), both based on "Le Merle olive de Saint-Domingue" of Daubenton (Pl. Enl., pl. 273, fig. 1) and Brisson (Orn., 2, p. 296, pl. 27, fig. 2), appear to me utterly unidentifiable.

<sup>4</sup> The passage, "Superciliis ad nucham productis et genis dilute fulvescentibus," clearly points to the typical race, to which a specimen from the same district (Bucaramanga) in the Berlepsch Collection actually pertains.

Nat. Hist. N. Y., 8, p. 98, 1865—Sombrero (cf. Baird, Rev. Amer. Bds., 1, p. 330; crit.).

*Vireosylva virginialis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 98 (in text), 1865—Sombrero Island (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York).

*Vireosylva altiloqua* Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad, Panama (one spec.).

*Vireo altiloquus* Léotaud, Ois. Trinidad, p. 250, 1866—Trinidad.

*Vireosylva calidris* (not *Motacilla calidris* Linnaeus) Baird, Rev. Amer. Bds., 1, p. 329, 1866—Jamaica, Santo Domingo, Porto Rico, St. Thomas, Santa Cruz, and Sombrero (monog.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1875, p. 234—Mérida, Venezuela; Berlepsch, Journ. Orn., 32, p. 285, 1884—Bucaramanga, Colombia (crit.; spec. examined).

*Vireo calidris* Salvin, Ibis, 1885, p. 204—Bartica Grove and Camacusa, British Guiana; Cory, Bds. W. Ind., p. 76, 1889—part; Verrill and Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Santo Domingo; Chubb, Bds. Brit. Guiana, 2, p. 391, 1921—same localities and Ituribisci River; Williams, Bull. Dept. Agric. Trin. Tob., 20, p. 128, 1922—Brestin Castle Estate, Trinidad.

*Vireosylva calidris calidris* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 137, 1904 (monog.); Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 155, 1916—Boca de Sina, Rio Cunucunuma, Venezuela; Peters, Bull. Mus. Comp. Zool., 61, p. 417, 1917—Monte Cristi and Sosúa, Dominican Republic; Todd and Carriker, Ann. Carnegie Mus., 14, p. 434, 1922—Bonda and Masinga Vieja, Colombia.

*Vireo calidris calidris* Allen, Bull. Amer. Mus. N. H., 21, p. 277, 1905—Bonda and Masinga [Vieja], Colombia; Hellmayr, Nov. Zool., 17, p. 268, 1910—Borba, Brazil (crit.).

*Vireo olivaceus olivaceus* Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 494, 1927—Porto Rico, Vieques, Louis Peña, Culebrita, St. Croix, St. Thomas (habits); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 354, 1931—Hispaniola, Gonave, and Tortue (habits).

*Vireo olivacea olivacea* Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 510, 1928—Haiti, Gonave, and Tortuga.

*Range*.—Islands of Jamaica, Haiti, Porto Rico, Virgin Islands (Vieques, Louis Peña, Culebrita, St. Croix, St. Thomas), Sombrero, and (?) Saba,<sup>1</sup> Antilles; during migration and in winter on the island of Trinidad, in Panama (one record), Colombia (Santa Marta region; Ocaña and Bucaramanga, Santander), Venezuela (Escorial, Mérida; Boca de Sina, Rio Cunucunuma), British Guiana (Bartica

<sup>1</sup> According to Ridgway, who refers a single female from Saba to the Jamaican *Vireo*.

Grove, Camacusa, Ituribisci River), and northern Brazil (Manáos; Borba, Rio Madeira).<sup>1</sup>

185: Haiti (Le Coup, 1); Dominican Republic (Santo Domingo City, 112; Samaná, 23; Aguacate, 5; Catare, 13; Honduras, 3; San Cristóbal, 9; Fuerte Resoli, 1); Porto Rico (Mayagüez, 17); Brazil (Manáos, 1).

**\*Vireo altiloquus barbadensis** Ridgway. BARBADOS VIREO.

*Vireosylva calidris* var. *barbadense* Ridgway, in Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 359, 1874—Barbados, Lesser Antilles (type in U. S. National Museum).

*Vireosylva calidris* var. *dominicana* Lawrence, Proc. U. S. Nat. Mus., 1, p. 55, 1878—Dominica (type in U. S. National Museum); idem, l.c., p. 189—St. Vincent; idem, l.c., p. 268—Grenada; idem, l.c., p. 364—Martinique; idem, l.c., p. 454—Guadeloupe; idem, l.c., p. 486 (range); Wells, l.c., 9, p. 611, 1887—Grenada (habits, nest, and eggs).

*Vireo lauræ* Nicoll, Bull. Brit. Orn. Cl., 14, p. 95, 1904—Grenada (type in British Museum); idem, Ibis, 1904, p. 563, pl. 11, fig. 2—Grenada.

*Vireo longirostris* Swainson, in Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 237, pub. Feb., 1832—part, St. Vincent.

*Vireo calidris* (not *Motacilla calidris* Linnaeus) Cory, Bds. W. Ind., p. 70, 1889—part; Verrill, Trans. Conn. Acad. Sci., 8, p. 340, 1892—Dominica; idem, Auk, 8, pp. 47, 48, 49, 1891—St. Eustatius, St. Kitts, and Guadeloupe.

*Vireosylva calidris barbadensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 140, 1904—St. Eustatius, Antigua, Montserrat, Guadeloupe, Dominica, Martinique, Santa Lucia, St. Vincent, Grenada, and Barbados (monog., full bibliog.); Riley, Smiths. Misc. Coll., 47, p. 288, 1904—Barbuda and Antigua; Clark, Proc. Bost. Soc. N. H., 32, p. 290, 1905—Lesser Antilles, from St. Eustatius to Grenada, Grenadines, and Barbados (crit.); Noble, Bull. Mus. Comp. Zool., 60, p. 388, 1916—Goyave and Soufrière, Guadeloupe.

*Vireo olivacea barbadensis* Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 538, 1928—Santa Lucia, Dominica, and St. Vincent.

**Range.**—Islands of St. Eustatius, St. Christopher [=St. Kitts], Barbuda, Antigua, Montserrat, Guadeloupe, Dominica, Martinique,

<sup>1</sup> Specimens of this form have been examined from the following localities in South America: Colombia: Bucaramanga (no date), 1.—Venezuela: Escorial, Mérida (male, Sept. 14, 1902), 1 (Hungarian National Museum, Budapest).—Brazil: Manáos (male, April 23, 1913), 1; Borba, Rio Madeira (male in full molt, Feb. 10, 1830), 1 (Vienna Museum). Williams (l.s.c.) records a male taken on Brestin Castle Estate, Trinidad, on July 14, 1919, which seems to be rather an early date.

Santa Lucia, St. Vincent, Grenada, including the Grenadines, and Barbados.<sup>1</sup>

59: Lesser Antilles (St. Eustatius, 11; St. Kitts, 9; Antigua, 1; Marie Galante, 2; Grande Terre, 2; Guadeloupe, 13; Martinique, 5; Santa Lucia, 10; St. Vincent, 5; Barbados, 1).

**\*Vireo altiloquus barbatulus** (Cabanis). BLACK-WHISKERED VIREO.

*Phyllomanes barbatulus* Cabanis, Journ. Orn., 3, p. 467, 1855—Cuba (type in Berlin Museum); Gundlach, l.c., 30, p. 401, 1872—Cuba (habits, nest, and eggs).

*Vireosylva barbatula* Baird, Rev. Amer. Bds., 1, p. 331, 1866—Cuba, Bahamas, and Charlotte Harbor, Florida (crit.); Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, pl. 17, fig. 1, 1874.

*Vireo calidris barbatula* Cory, Bds. W. Ind., p. 77, 1889—Bahamas and Cuba; idem, Cat. W. Ind. Bds., p. 115, 1892—Bahamas (Abaco, Biminis, Andros, New Providence, Samaná Cay), Cuba, Isle of Pines, and Little Cayman; Bangs, Auk, 17, p. 288, 1900—New Providence and Eleuthera (molt); Allen, Bull. Amer. Mus. N. H., 13, p. 173, 1900—Bonda, Santa Marta, Colombia; idem, l.c., 21, p. 277, 1905—Bonda (crit.); Griscom, Bull. Mus. Comp. Zool., 72, p. 366, 1932—Obaldia, Panama.

*Vireosylva calidris barbatula* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 141, 1904—Bahamas, Cuba, Isle of Pines, Little Cayman, and southern Florida (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Abaco, Biminis, New Providence, Eleuthera, Current Island, Andros, Green Cay, Cay Lobos, Bird Rock, Long Island, Samaná; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 428, 458, 1911—Andros and Abaco, Bahamas; Todd, l.c., 10, p. 257, 1916—Nueva Gerona, Isle of Pines (crit.); Bangs, Bull. Mus. Comp. Zool., 60, p. 314, 1916—Little Cayman and Cayman Brac; Todd, Ann. Carnegie Mus., 14, p. 434, 1922—Mamatoco and Tucurinca, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 108, 1923—Cuba.

*Vireo calidris* (not *Motacilla calidris* Linnaeus) Bonhote, Ibis, 1899, p. 511—Nassau, New Providence (crit.).

*Vireo caymanensis* (errore) Cory, Auk, 6, p. 31, 1889—Little Cayman and Cayman Brac.

*Vireo altiloquus* var. *barbatulus* Cory, Bds. Bahama Islands, p. 82, 1890—Bahamas.

*Vireo olivaceus barbatula* Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 33, 1932—Gonave Island and Ile à Vache (migrants).

<sup>1</sup> Individual and seasonal variation has been discussed at length by Austin Clark, who arrived at the conclusion that further subdivision of this form is impracticable. As far as our own material goes, I cannot but concur with this disposition of the case, and refer the inhabitants of the Lesser Antilles (from St. Eustatius to Grenada) to a single form, whose earliest name is *barbadensis* Ridgway.

*Range*.—Bahamas (Abaco, Biminis, New Providence, Inagua, Eleuthera, Current Island, Andros, Green Cay, Cay Lobos, Bird Rock, Long Island, Samaná); Cuba, including Isle of Pines; Little Cayman and Cayman Brac; west coast of southern Florida, as far north as Anclote Keys; Key West and Dry Tortugas; winters in Colombia (Santa Marta region) and Panama (one record from Obaldia).

34: Cayman Islands (Little Cayman, 8; Cayman Brac, 7); Bahama Islands (Inagua, 9; Abaco, 1; Bimini, 1; Nassau, New Providence, 2); Cuba (unspecified, 3); Florida (Key West, 2); Dutch West Indies (Bonaire, 1).

**\*Vireo altiloquus grandior (Ridgway).<sup>1</sup> OLD PROVIDENCE VIREO.**

*Vireosylva grandior* Ridgway, Proc. U. S. Nat. Mus., 7, p. 178, 1884—Old Providence (type in U. S. National Museum); Cory, Auk, 4, p. 180, 1887—Old Providence.

*Vireosylva calidris grandior* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 143, 1904—Old Providence (monog.).

*Vireo olivaceus grandior* Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 17, 1931—Old Providence.

*Range*.—Island of Old Providence, Caribbean Sea.

7: Old Providence.

**\*Vireo altiloquus canescens (Cory).<sup>2</sup> SAINT ANDREWS VIREO.**

*Vireosylva canescens* Cory, Auk, 4, pp. 178, 180, 1887—St. Andrews Island (type in coll. of C. B. Cory, now in Field Museum).

*Vireosylva calidris canescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 143, 1904—St. Andrews.

*Vireo olivaceus canescens* Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 17, 1931—St. Andrews (crit.).

*Range*.—Island of St. Andrews, Caribbean Sea.

4: St. Andrews.

**\*Vireo philadelphicus (Cassin). PHILADELPHIA VIREO.**

*Vireosylva philadelphia* Cassin, Proc. Acad. Nat. Sci. Phila., 5, p. 153, 1851—Philadelphia, Pennsylvania (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 31, 1899); idem, l.c., 6, pl. 1, fig. 2, 1852.

<sup>1</sup> *Vireo altiloquus grandior* (Ridgway), the largest representative of the group, is not unlike *V. a. barbadensis* in coloration but is paler, with the dusky lateral stripe on the crown indistinct and the dusky submalar streak much narrower.

<sup>2</sup> *Vireo altiloquus canescens* (Cory): Resembles *V. a. grandior* in size and reduction of dusky submalar streak, but is decidedly more grayish, less olivaceous, on the dorsal surface.

*Vireosylva(i)a philadelphica* Baird, Rev. Amer. Bds., 1, p. 340, 1866 (monog., range); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 151, 1904 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 782, 1910—Costa Rica (winter).

*Vireosylva cobanensis* Sclater, Proc. Zool. Soc. Lond., 28, p. 463, 1860—Coban, Guatemala (type in coll. of P. L. Sclater, now in British Museum).

**Range.**—Canadian zone of North America, from northern Alberta, southern Manitoba, northern Ontario, New Brunswick, and Maine to North Dakota, Michigan, and New Hampshire; winters from Cozumel Island, Yucatan, and Guatemala to Panama.

24: New York (Gaines, 1); Illinois (Deerfield, 4; Waukegan, 3; Lake Forest, 5; Calumet, 1; Henry, 3); Costa Rica (Guayábo, 2; Palmar, 1; Port Limón, 1; Terrabá, 1; Boruca, 1; Punta Mala, Rio Duquis, 1).

**\*Vireo gilvus gilvus (Vieillot). EASTERN WARBLING VIREO.**

*Muscicapa gilva* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 65, pl. 34, 1808—New York (type in coll. of P. L. Vieillot).

*Muscicapa melodia* Wilson, Amer. Orn., 5, p. 85, pl. 42, fig. 2, 1812—Pennsylvania (type now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 343, 1930).

*Vireosylva gilva* Baird, Rev. Amer. Bds., 1, p. 342, 1866 (monog., range).

*Vireosylva gilva gilva* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 153, 1904 (monog., full bibliog.).

*Vireo gilvus gilvus* Griscom, Bull. Amer. Mus. N. H., 64, p. 316, 1932—Guatemala.

**Range.**—Transition and Austral zones of North America, from Saskatchewan, Manitoba, Ontario, and Nova Scotia south to northwestern Texas, southern Louisiana, Kentucky, North Carolina, and Virginia, west to North Dakota; winters in Guatemala.

21: Connecticut (East Hartford, 1); Massachusetts (Cliftondale, 1); Ohio (Columbus, 3); Indiana (English Lake, 1); Illinois (Wolf Lake, 2; South Chicago, 1; Henry, 1); Wisconsin (Lake Koshkonong, 2; Beaver Dam, 8); Saskatchewan (Prince Albert, 1).

**\*Vireo gilvus swainsonii Baird. WESTERN WARBLING VIREO.**

*Vireo swainsonii* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 336 (in text), 1858—"Pacific coast" (type, from Petaluma, California, in U. S. National Museum).

*Vireosylva swainsoni* Baird, Rev. Amer. Bds., 1, p. 343, 1866—from the Rocky Mountains to the Pacific coast (monog.).

*Vireosylva gilva swainsonii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 155, 1904 (monog., full bibliog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser.,



1, p. 124, 1907—El Rancho and Patulul, Guatemala; Phillips, Auk, 28, p. 83, 1911—Galindo, Tamaulipas; Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz; idem, l.c., 68, p. 400, 1928—Chivelá, Oaxaca; Grinnell, Univ. Calif. Pub. Zool., 32, p. 194, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1931—Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 317, 1932—Progreso, Guatemala.

*Range*.—Western North America, from southern British Columbia, southwestern Mackenzie, and northern Alberta south to Lower California, northern Sonora, Arizona, New Mexico, and central-western Texas, and east to western South Dakota and northwestern Nebraska; winters south to western Guatemala.<sup>1</sup>

44: Canada (Okanagan Landing, British Columbia, 3; unspecified, 1); Colorado (Fort Lyon, 2; Hot Sulphur Springs, 1; Williams Range, 1; unspecified, 1); Arizona (Calabasas, 6; Chiricahua Mountains, 2; Huachuca Mountains, 4); California (Little Bear Valley, San Bernardino Mountains, 2; Millard's Canyon, 1; Claremont, 1; Los Gatos, 2; Nicasio, 1; Mount Diablo, 1; Alhambra, 2; near Niles, 1); Mexico (Tuxpan, Jalisco, 1; Lower California, Sierra Laguna, 1; unspecified, 1); Guatemala (Patulul, Solola, 8; El Rancho, Zacapa, 1).

**Vireo gilvus brewsteri** (Ridgway).<sup>2</sup> CHIHUAHUA WARBLING VIREO.

*Vireosylva gilva brewsteri* Ridgway, Proc. Biol. Soc. Wash., 16, p. 107, 1903—Bravo, Chihuahua, Mexico (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 343, 1930); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 158, 1904—Chihuahua.

*Range*.—Mountains of Chihuahua, in northwestern Mexico.

**Vireo leucophrys**<sup>3</sup> *amauronotus* Salvin and Godman.<sup>4</sup> ORIZABA VIREO.

<sup>1</sup> Oberholser (Sci. Publ. Clevel. Mus. N. H., 4, p. 9, 1932) has lately separated *Vireosylva gilva leucopolia* from Oregon (type from Barley Camp, Warner Mountains).

<sup>2</sup> We are not acquainted with this race.

<sup>3</sup> I think it very likely that the *V. leucophrys* group will prove to be conspecific with the Warbling Vireo (*V. gilvus*), as was intimated long ago by Ridgway (Amer. Journ. Sci., (3), 4, p. 456, 1872).

<sup>4</sup> *Vireo leucophrys amauronotus* Salvin and Godman is clearly but a geographic race of the South American species. The palest specimens of *V. l. mirandae* are just a faint shade more yellowish on the abdomen than Jalapa birds, the latter differing only by rather longer wings, less dusky pileum, and warmer brownish, less olivaceous, back. Moreover, the Chiapas race, which is autoptically unknown to us, appears to form the passage between *amauronotus* and *chiriquensis*, combining the pale (whitish) under parts of the former with the dark-colored dorsal surface of the latter. Adult males measure as follows: wing, 69–71; tail, 49–52; bill, 11–12.

*Material examined*.—Vera Cruz: Jalapa, 4.

*Vireo amauronotus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 193, Dec., 1881—Orizaba, Vera Cruz, Mexico (type in U. S. National Museum); Gadow, Cat. Bds. Brit. Mus., 8, p. 298, 1883—Orizaba; Chapman, Bull. Amer. Mus. N. H., 10, p. 25, 1898—Jalapa, Vera Cruz (crit., song).

*Vireosylva amauronota amauronota* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 158, 1904—highlands of Vera Cruz, Mexico.

*Vireosylva gilva* var. *josephae* (not *Vireo josephae* Sclater) Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 360 (footnote), 1874—part, Orizaba, Vera Cruz.

**Range.**—Subtropical zone of Vera Cruz (Orizaba, Jalapa), south-eastern Mexico.

### **Vireo leucophrys strenuus** Nelson.<sup>1</sup> CHIAPAS VIREO.

*Vireo amauronotus strenuus* Nelson, Auk, 17, p. 268, 1900—Tumbalá, Chiapas (type in U. S. National Museum).

*Vireosylva amauronota strenua* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 159, 1904—Chiapas.

**Range.**—Subtropical zone of Chiapas (Tumbalá), southern Mexico.

### **\*Vireo leucophrys chiriquensis** (Bangs).<sup>2</sup> CHIRIQUÍ VIREO.

*Vireosylva josephae chiriquensis* Bangs, Proc. New Engl. Zool. Cl., 4, p. 9, March 24, 1903—Boquete, Volcan de Chiriquí, Panama (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 344, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 161, 1904—part, Chiriquí.

*Vireosylva josephae costaricensis* Ridgway, Proc. Biol. Soc. Wash., 16, p. 107, Sept. 80, 1903—San José, Costa Rica (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 159, 1904—Costa Rica; Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 274, 1910—Coliblanco, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 782, 1910—El Copey, Santa María de Dota, La Estrella de Cartago, Puriscal, Volcan de Irazú, and Ujurrás de Térraba, Costa Rica.

<sup>1</sup> *Vireo leucophrys strenuus* Nelson: Similar to *V. l. amauronotus* on the under parts, but with the pileum much darker, deep sooty brown or sepia, and the back more brownish olive.

Known from a single adult female in the collection of the U. S. National Museum.

<sup>2</sup> *Vireo leucophrys chiriquensis* (Bangs) resembles *V. l. leucophrys* in the deep yellow coloration of the posterior under parts, but differs by brighter, more greenish back and slightly duller pileum.

Though the characters are quite noticeable in a series, single individuals are not always easily told apart. Direct comparison of adequate material shows the alleged differences between *chiriquensis* and *costaricensis* to be non-existent.

**Additional material examined.**—Costa Rica: La Estrella, 4; Irazú, 2.—Panama: Boquete, 4.

*Vireosylva josephae* (not *Vireo josephae* Sclater) Baird, Rev. Amer. Bds., 1, p. 344, 1866—part, Costa Rica (Barránca and Dota); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 96, 1868—Barránca, Rancho Redondo, and Dota, Costa Rica; Frantz, Journ. Orn., 17, p. 295, 1869—Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 53—Naranjo, Costa Rica.

*Vireo josephae* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 194, 1881—part, Costa Rica and Panama (Volcan de Chiriquí); Gadow, Cat. Bds. Brit. Mus., 8, p. 297, 1883—part, Costa Rica to Panama; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Rancho Redondo de San José; Bangs, Proc. New Engl. Zool. Cl., 3, p. 58, 1902—Boquete and Caribbean slope of Volcan de Chiriquí, Panama.

*Vireosylva gilva* var. *josephae* Ridgway, Amer. Journ. Sci., (3), 4, p. 456, 1872—part, Costa Rica.

*Range*.—Subtropical zone of Costa Rica and extreme western Panama (Chiriquí).

7: Costa Rica (La Estrella de Cartago, 2; Volcan de Irazú, 2; Coliblanco, 1); Panama (Boquete, 2).

### *Vireo leucophrys mirandae* Hartert.<sup>1</sup> MIRANDA'S VIREO.

*Vireo josephae mirandae* Hartert, Bull. Brit. Orn. Cl., 37, p. 32, 1917—"Galiparo" [=Galipán], Cerro del Avila, Venezuela (type in Tring Museum, now in the American Museum of Natural History, New York).

*Vireosylva josephae mirandae* Todd and Carriker, Ann. Carnegie Mus., 14, p. 431, 1922—Las Nubes, El Libano, Valparaiso, Cincinnati, San Miguel, Cerro de Caracas, and Heights of Chirua, Santa Marta region, Colombia (crit., habits); Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 159, 1924—Loma Redonda and Galipán, Venezuela (crit.).

*Vireosylva josephae* (not *Vireo josephae* Sclater) Baird, Rev. Amer. Bds., 1, p. 344, 1866—part, "Puerto Cabello," Venezuela.

*Vireo josephae* Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—"Páramo de Macotama," Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 172, 1900—Valparaiso, El Libano, and Las Nubes, Colombia.

*Vireo josephae josephae* Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 49, 1912—Cumbre de Valencia, Venezuela.

<sup>1</sup> *Vireo leucophrys mirandae* Hartert: Exceedingly close to *V. l. leucophrys*, but on average paler yellow underneath, and the dorsal plumage also slightly lighter, less brownish. Wing, 66–69, (female) 63–65; tail, 48–52, (female) 45–49; bill, 11–12.

This is a very poor race, barely distinguishable in series by its averagingly paler coloration, particularly below. Santa Marta birds, of which we have examined a small number, appear to be inseparable from those of the Caracas region. A single female from La Cumbre de Valencia, though not different from the general run of "Bogotá" skins, must, on geographical grounds, be referred to *V. l. mirandae*, if this form be maintained at all.

*Material examined*.—Colombia: Santa Marta region, 5.—Venezuela: Loma Redonda, north of Caracas, 1; Galipán, Cerro del Avila, 16; La Cumbre de Valencia, Carabobo, 1.

*Vireosylva josephae chiriquensis* (not of Bangs) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 161, 1904—part, Santa Marta region, Colombia.

**Range.**—Subtropical zone of northern Colombia (Santa Marta region) and northern Venezuela (Cumbre de Valencia; north coast mountains near Caracas).

**\*Vireo leucophrys leucophrys (Lafresnaye). WHITE-BROWED VIREO.**

*Hylophilus leucophrys* Lafresnaye, Rev. Zool., 7, p. 81, 1844—"Colombie"—Bogotá (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 343, 1930); Bangs and Penard, Proc. Biol. Soc. Wash., 35, p. 226, 1922 (crit.).

*Vireosylva leucophrys leucophrys* Chapman, Bull. Amer. Mus. N. H., 55, p. 587, 1926—Sabanilla and Baeza, eastern Ecuador (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 414, 1929—Chinchao, Peru (crit.).

*Vireosylva josephae* (not *Vireo josephae* Sclater) Baird, Rev. Amer. Bds., 1, p. 344, 1866—part, Bogotá; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Paltaypampa, Peru; idem, l.c., 1879, p. 224—Tambillo, Peru (spec. examined); Sclater and Salvin, l.c., 1879, p. 495—Concordia and Medellín, Colombia; Taczanowski, Orn. Pér., 1, p. 444, 1884—Paltaypampa and Tambillo, Peru; Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 75—Machay, Mapoto, and Baños, Ecuador; Berlepsch and Stolzmann, l.c., 1896, p. 332—Garita del Sol, Dept. Junín, Peru.

*Vireosylva josephae josephae* Chapman, Bull. Amer. Mus. N. H., 36, p. 540, 1917—part, San Antonio, Cerro Munchique, La Sierra, Miraflores, Salento, Santa Elena, El Eden, La Palma, La Candela, near San Agustín, Fusugasugá, and El Roble, Colombia; Bangs and Noble, Auk, 35, p. 458, 1918—Tabaconas, northern Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 105, 1921—Idma, San Miguel Bridge, and Santa Ana, Urubamba, Peru.

*Vireo josephae* Gadow, Cat. Bds. Brit. Mus., 8, p. 297, 1883—part, Colombia and Peru; Berlepsch and Stolzmann, Ornith., 13, p. 76, 1906—Idma, Urubamba, Peru.

**Range.**—Subtropical zone of extreme western Venezuela (Andes of Mérida and Tachira), Colombia (excepting Santa Marta region), eastern Ecuador, and Peru.<sup>1</sup>

4: Venezuela (Rio Chama, Mérida, 1); Colombia (Páramo de Tamá, Santander, 1; La Candela, Huira, 1); Peru (Chinchao, Dept. Huánuco, 1).

<sup>1</sup> Specimens from various parts of Peru and the Mérida region, Venezuela, are obviously identical with a Colombian series.

**Additional material examined.**—Venezuela, Mérida: Mérida, 1; El Valle, 1; Conejos, 1.—Colombia: "Bogotá," 14.—Ecuador: Baños, 1.—Peru: Tambillo, 2; Idma, Urubamba, 1; Marcapata, 2; Chuhuasi, Sierra de Carabaya, 2.

**\*Vireo leucophrys josephae Sclater.<sup>1</sup> FRASER'S VIREO.**

*Vireo josephae* Sclater, Proc. Zool. Soc. Lond., 27, p. 137, pl. 154, 1859—Pallatanga, Ecuador (type in coll. of P. L. Sclater, now in British Museum); idem, l.c., 28, pp. 47, 85, 1860—Chillanes and Nanegal; Gadow, Cat. Bds. Brit. Mus., 8, p. 297, 1883—part, Ecuador (Pallatanga, "Quito"); Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 77, 1922—Gualea, Ecuador.

*Vireosylva josephae* Baird, Rev. Amer. Bds., 1, p. 344, 1866—part, Ecuador; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287—Pedregal and Cayandeled, Ecuador; Goodfellow, Ibis, 1901, p. 316—Mindó and Canzacota, Ecuador.

*Vireosylva josephae josephae* Chapman, Bull. Amer. Mus. N. H., 36, p. 540, 1917—part, Ricaurte, Nariño, southwestern Colombia.

*Vireosylva leucophrys josephae* Chapman, l.c., 55, p. 588, 1926—Huigra, Pagma Forest, Naranjo, Rios Coco and Chimbo, Pallatanga, El Chiral, Zaruma, Punta Santa Ana, San Bartolo, Las Piñas, Celica, and Alamor, Ecuador, and Palambla, northwestern Peru.

*Vireosylva gilva* var. *josephae* Ridgway, Amer. Journ. Sci., (3), 4, p. 456, 1872—part, Ecuador.

**Range.**—Subtropical zone of extreme southwestern Colombia (Ricaurte, Nariño), western Ecuador, and northwestern Peru (Palambla, Dept. Piura).

1: Colombia (Ricaurte, Nariño, 1).

**Vireo leucophrys laetissimus (Todd).<sup>2</sup> BOLIVIAN VIREO.**

*Vireosylva leucophrys laetissima* Todd, Proc. Biol. Soc. Wash., 37, p. 124, 1924—Incachaca, Bolivia (type in Carnegie Museum).

**Range.**—Subtropical zone of Bolivia, in depts. of La Paz and Cochabamba.

<sup>1</sup> *Vireo leucophrys josephae* Sclater: Exactly like *V. l. leucophrys*, but with pileum darker, more fuscous black. West Ecuadorian birds, of which we have examined six, appear to be distinguishable by their more blackish cap. A single adult specimen from Ricaurte, near the southern extremity of the western Andes of Colombia, is similar.

<sup>2</sup> *Vireo leucophrys laetissimus* (Todd): Similar to *V. l. leucophrys*, but perhaps separable by slightly paler coloration.

We have not enough material to form a definite opinion on the merits of this race. The describer, who based it on ten specimens, calls it "the most strongly marked of all the races," while Chapman states that his five Bolivian skins, though on average paler, can be matched by east Colombian examples. The only adult, a male from Chaco, Yungas, of La Paz, that we have been able to examine, is indeed lighter, both above and below, than any other specimen from Peru, Ecuador, or Colombia, but can be matched by some unusually dark individuals of *mirandae*.

**Material examined.**—Bolivia: Chaco, 1; San Cristóbal, 2.

Genus *NEOCHLOE* Sclater<sup>1</sup>

*Neochloe* Sclater, Proc. Zool. Soc. Lond., 25, "1857," p. 213, pub. Jan., 1858—type, by monotypy, *Neochloe brevipennis* Sclater.

*Neochloe brevipennis* Sclater. GREEN-WINGED VIREO.

*Neochloe brevipennis* Sclater, Proc. Zool. Soc. Lond., 25, "1857," p. 213, pub. Jan., 1858—Orizaba, Vera Cruz (type in British Museum); Baird, Rev. Amer. Bds., 1, p. 372, 1866—Orizaba (monog.); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 547, 1869—Orizaba; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 205, pl. 13, fig. 2, 1881—Orizaba and Jalapa, Vera Cruz; Gadow, Cat. Bds. Brit. Mus., 8, p. 305, 1883—Orizaba; Chapman, Bull. Amer. Mus. N. H., 10, p. 26, 1898—Jalapa, Vera Cruz (habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 212, 1904—mountains of Vera Cruz (monog.).

*Range*.—Mountains of Mexico, in Vera Cruz (Orizaba, Jalapa).

Genus *LALETES* Sclater<sup>2</sup>

*Laletes* Sclater, Proc. Zool. Soc. Lond., 1861, p. 72—type, by orig. desig., *Laletes osburni* Sclater.

*Laletes osburni* Sclater. OSBURN'S VIREO.

*Laletes osburni* Sclater, Proc. Zool. Soc. Lond., 1861, p. 72, pl. 14, fig. 2—Freeman's Hall, Trelawny, Jamaica (types in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 359, 1862—Freeman's Hall; Baird, Rev. Amer. Bds., 1, p. 383, 1866—Jamaica (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 313, 1883—Jamaica; Cory, Auk, 3, p. 190, 1886—Jamaica (descr.); idem, Bds. W. Ind., p. 77, 1889—Jamaica; Scott, Auk, 10, p. 339, 1893—Jamaica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 213, 1904—Jamaica (monog.).

*Range*.—Island of Jamaica, Greater Antilles.

Genus *HYLOPHILUS* Temminck<sup>3</sup>

*Hylophilus* Temminck, Nouv. Rec. Pl. Col., livr. 29, text to pl. 173, Dec., 1822—type, by subs. desig. (Gray, List Gen. Bds., p. 23, 1840), *Hylophilus poicilotis* Temminck.

<sup>1</sup> We have not been able to make a close study of this genus and are not prepared to commit ourselves on its merits. So far as the species is concerned, it is a distinct one, however, and differs radically in coloration from any other vireo, as inspection of the type specimen in the British Museum clearly showed.

<sup>2</sup> According to Ridgway, this genus is "so nearly like *Vireo* that if *Vireosylva* and *Laniavireo* be not recognized *Laletes* certainly should not."

There is no specimen available at present, but when we examined the species years ago we were not much impressed with the generic value of its structural divergencies, as compared to *Vireo* (s. strict.).

<sup>3</sup> *Hylophilus* Temminck, set aside for a while in favor of *Pachysylvia*, again becomes the proper term of this genus, since the supposedly earlier *Hylophila* Huebner (Verz. Bek. Schmetterlinge, p. 396) was not published until 1827 (cf. Hampson, Entom. News, 28, p. 466, 1917; Sherborn and others, Ann. Mag. Nat. Hist., (10), 3, p. 568, 1929).

*Pachysylvia* Bonaparte, *Consp. Gen. Av.*, 1, p. 309, 1851—type, by monotypy, *Sylvicola decurtata* Bonaparte.

**\**Hylophilus poicilotis poicilotis* Temminck. RUFIOUS-CROWNED HYLOPHILUS.**

*Hylophilus poicilotis* Temminck, *Nouv. Rec. Pl. Col.*, livr. 29, pl. 173, fig. 2, Dec., 1822—"Brésil" (type from Ypanema, São Paulo, in Leiden Museum).

*Sylvia poicilotis* Nordmann, in Erman's *Reise, Naturhist. Atlas*, pp. 13, 14, 1835—Brazil.

*Hylophilus poecilotis* Cabanis, *Mus. Hein.*, 1, p. 67, 1851—Brazil; Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 110, 1856—Nova Friburgo, Rio; Baird, *Rev. Amer. Bds.*, 1, p. 375, 1866—part, spec. ex "coast of Brazil" (G. Horner Collection); Pelzeln, *Orn. Bras.*, 2, p. 70, 1868—part, São Paulo (Ypanema, Ytararé) and Paraná (Jaguaraíba, Curytiba); Reinhardt, *Vidensk. Medd. Naturhist. Foren.*, 1870, p. 446—part, São Paulo (Hytú, São Bento de Araraquara) and Rio de Janeiro (Macahé); Sclater, *Ibis*, 1881, p. 300—southern Brazil (monog.); White, *Proc. Zool. Soc. Lond.*, 1882, p. 595—San Javier, Misiones; Gadow, *Cat. Bds. Brit. Mus.*, 8, p. 308, 1883—Brazil (descr.); Sclater and Hudson, *Arg. Orn.*, 1, p. 23, 1888—San Javier, Misiones; Ihering, *Rev. Mus. Paul.*, 3, p. 136, 1899—São Paulo; idem, *l.c.*, 4, p. 152, 1900—Nova Friburgo; idem, *l.c.*, 4, p. 205, 1900 (nest descr.); (?) Grant, *Ibis*, 1911, p. 89—Riacho Paraguay Mirim and Rabiche, near Corumbá, Matto Grosso.

*Hylophilus poecilotes* Miranda Ribeiro, *Arch. Mus. Nac. Rio de Janeiro*, 13, p. 183, 1906—Retiro do Ramos, Itatiaya.

*Pachysylvia poecilotis* Ihering, *Rev. Mus. Paul.*, 6, p. 318, 1905—Paraguay; idem, *Cat. Faun. Braz.*, 1, p. 336, 1907—São Paulo (Ypiranga, Itatiba, Alto da Serra, Tieté, Rincão, Baurú, Rio Feio, Leme, Itararé) and southern Minas Geraes (Itatiaya); Chubb, *Ibis*, 1910, p. 613—Sapucay, Paraguay; Dabbene, *Anal. Mus. Nac. Buenos Aires*, 18, p. 365, 1910—Misiones (San Javier) and Paraguay (Puerto Bertoni); Bertoni, *Faun. Parag.*, p. 61, 1914—Alto Paraná; Dabbene, *Bol. Soc. Physis*, 1, p. 353, 1914—San Javier, Misiones; Sztolcman, *Ann. Zool. Mus. Pol. Hist. Nat.*, 5, p. 184, 1926—Banhados, Fazenda Durski, Cará Pintada, Therezina, Barra do Rio Bom, and Porto Mendes, Paraná; Holt, *Bull. Amer. Mus. N. H.*, 57, p. 314, 1928—Serra do Itatiaya.

*Pachysylvia (Hylophilus) poecilotis* Lüderwaldt, *Zool. Jahrb. (Syst.)*, 27, p. 356, 1909—Itatiaya.

*Pachysylvia poicilotis* Todd, *Proc. Biol. Soc. Wash.*, 42, p. 185, 1929—southern Brazil, Paraguay, and Misiones (monog.).

(?) *Pachysylvia poecilotis poecilotis* Naumburg, *Bull. Amer. Mus. N. H.*, 60, p. 335, 1930—Riacho Paraguay Mirim and Rabiche, Matto Grosso (ex Grant).

*Serpophaga cinnaocephala* Bertoni, Anal. Cient. Parag., 1, No. 1, p. 125, 1901—Alto Paraná, Paraguay (type in coll. of A. de W. Bertoni); Arribálgaza, Anal. Mus. Nac. Buenos Aires, 7, p. 365, 1902 (crit).<sup>1</sup>

**Range.**—Wooded region of southeastern Brazil, from Rio de Janeiro and the confines of Minas Geraes (Serra do Itatiaya) south through São Paulo and Paraná to Santa Catharina, extending west to Paraguay (Alto Paraná, Sapucay) and northeastern Argentina (San Javier and Puerto Segundo, Misiones); (?) southwestern Matto Grosso (vicinity of Corumbá).<sup>2</sup>

3: Brazil (Joinville, Santa Catharina, 2); Argentina (Puerto Segundo, Misiones, 1).

**\*Hylophilus poicilotis amaurocephalus (Nordmann). NORTH-ERN RUFOUS-CROWNED HYLOPHILUS.**

*Sylvia amaurocephala* Nordmann, in Erman's Reise, Naturhist. Atlas, p. 14, 1835—"Brazil" (the type examined in the Berlin Museum was received from the Prince of Wied; type locality, therefore, boundary line of Minas Geraes and Bahia).

*Sylvia poicilotis* (not *Hylophilus poicilotis* Temminck) Wied, Beitr. Naturg. Bras., 3, (2), p. 715, 1831—Sertão of the provinces of Minas Geraes and Bahia; Nordmann, in Erman's Reise, Naturhist. Atlas, pl. 9, fig. 3,<sup>3</sup> 1835.

*Hylophilus poicilotis* Baird, Rev. Amer. Bds., 1, p. 375, 1866—part, descr. spec. ex Bahia; Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Rio Paraná, São Paulo; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 446—part, Lagoa Santa, Minas Geraes.

<sup>1</sup> I now agree with Arribálgaza that Bertoni's bird is the Rufous-crowned Hylophilus, and not *Euscarthmus meloryphus* (Wied), as intimated in a preceding volume of this "Catalogue."

<sup>2</sup> Two adults from Paraguay (Sapucay) and one from Misiones agree with others from Santa Catharina in very dark (nearly blackish) auriculars, decidedly yellowish under parts, and in having very little grayish suffusion behind the rufous cap. In São Paulo, this form intergrades with *H. p. amaurocephalus*, which reaches the southern limit of its distribution in the northern part of that state. Of five specimens obtained by Natterer at Ypanema three are typical *poicilotis*, one is less yellowish on the under parts, while the fifth is just as buffy below as Bahia examples of *amaurocephalus*, from which it merely differs by proportionately longer tail. Another adult male from Jaguariba, Paraná, cannot be distinguished, even in size, from the latter race. The fact that it is *H. p. amaurocephalus* which inhabits the Paraná region on the northern confines of São Paulo casts serious doubts on Grant's identification of birds from the vicinity of Corumbá, Matto Grosso, as *P. poicilotis*, and reexamination is imperative in order to establish their proper status.

**Additional material examined.**—São Paulo: Ypanema, 5; Itararé, 1; Victoria de Botucatú, 1.—Paraná: Jaguariba, 1; Curytiba, 1; Roça Nova, Serra do Mar, 1.—Santa Catharina: Ararangua, 3.—Paraguay: Sapucay, 2.

<sup>3</sup> In spite of Nordmann's assertion that the figure was made from Erman's south Brazilian example, it unquestionably represents the form named by him *S. amaurocephala*.



*Hylophilus amaurocephalus* Sclater, Ibis, 1881, p. 301—Bahia and Minas Geraes (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 308, 1883—eastern Brazil.

*Pachysylvia amaurocephala* Ihering, Cat. Faun. Braz., 1, p. 336, 1907—Bahia; Todd, Proc. Biol. Soc. Wash., 42, p. 186, 1929—eastern Brazil, from Piauhý and Ceará to São Paulo (monog.).

*Pachysylvia (Hylophilus) poecilotis amaurocephalus* Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 79, 1910—Bahia.

*Pachysylvia poecilotis amaurocephala* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 262, 1929—Arára, Piauhý, and Varzea Formosa, Ceará (crit.).

*Pachysylvia amaurocephala cearensis* Snethlage, Journ. Orn., 73, p. 266, 1925—São Paulo, Serra do Ibiapaba, Ceará (type probably in the Museu Nacional, Rio de Janeiro); idem, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926 (nomen nudum).

**Range.**—Eastern Brazil, from Piauhý and Ceará south through Bahia and Minas Geraes to northern São Paulo (Rio Paraná).<sup>1</sup>

5: Brazil (Santo Amaro, Bahia, 1; Arára, Piauhý, 2; Varzea Formosa, Ceará, 2).

### **Hylophilus thoracicus thoracicus** Temminck. LEMON-CHESTED HYLOPHILUS.

*Hylophilus thoracicus* Temminck, Nouv. Rec. Pl. Col., livr. 29, pl. 173, fig. 1, Dec., 1822—"Brésil" (type from Rio de Janeiro, coll. by Natterer, in the Leiden Museum;<sup>2</sup> Burmeister, Syst. Uebers. Th. Bras., 3, p. 110, 1856—coast district of Rio de Janeiro to the Rio Parahyba, "also in São Paulo"; Baird, Rev. Amer. Bds., 1, p. 375, 1866—coast of Brazil; Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Sapitiba and Rio de Janeiro, Prov. Rio de Janeiro (spec. examined); Ihering, Rev. Mus. Paul., 3, p. 137, 1899—"Iguapé, São Paulo" (no spec. extant).

<sup>1</sup> Birds from northern São Paulo and Minas Geraes, while identical in coloration with more northern examples, are slightly larger (wing, 56–58, against 52–55; tail, 53–57, against 47–53) with stronger bills, and thus approach *H. p. poecilotis*. Nordmann's type, although partly discolored by preservation in alcohol, shows the same large proportions and, no doubt, came from Minas Geraes and not from Rio de Janeiro, as stated on the label. An adult male from Victoria de Botucatu and one from the Rio Paraná, São Paulo, are typical of the present form, while another specimen from the first-named locality cannot be separated from *poecilotis*. Birds from Ceará (*cearensis* Snethlage) are indistinguishable from Bahia skins, but their slightly smaller size, in comparison to those from Minas and São Paulo, seems too insignificant a divergency to warrant their discrimination.

**Material examined.**—Piauhý: Arára, 2.—Ceará: Varzea Formosa, 2.—Bahia: Santo Amaro, 1; Lamarão, 1; Bahia, 9.—Minas Geraes: Agua Suja, near Bagagem, 2.—São Paulo: Rio Paraná, 1; Victoria de Botucatu, 1.

<sup>2</sup> According to the original registers of the Vienna Museum, the specimen sent in exchange to, and figured by, Temminck was a male taken by Natterer in August, 1818, at Rio de Janeiro. A second male collected at the same time is still preserved in the Vienna Museum.

*Sylvia thoracica* Wied, Beitr. Naturg. Bras., 3, (2), p. 717, 1831—Rio Parahyba, Rio de Janeiro.

*Pachysylvia thoracica* Ihering and Ihering, Cat. Faun. Braz., 1, p. 336, 1907—"São Paulo," Rio de Janeiro, and "Matto Grosso" (errore); Todd, Proc. Biol. Soc. Wash., 42, p. 187, 1929—La Raiz, foot of Organ Mountains, Rio de Janeiro (monog.).

*Pachysylvia thoracica thoracica* Hellmayr, Nov. Zool., 15, p. 20, 1908—State of Rio de Janeiro (crit.).

**Range.**—Wooded region of southeastern Brazil, in State of Rio de Janeiro (Rio Parahyba; Rio de Janeiro; Sapitiba; Manguinhos; La Raiz), and probably in the adjacent section of São Paulo.<sup>1</sup>

**\**Hylophilus thoracicus aemulus* (Hellmayr).<sup>2</sup> WESTERN GRAY-BELLIED HYLOPHILUS.**

*Pachysylvia thoracica aemula* Hellmayr, Anz. Orn. Ges. Bay., 1, No. 3, p. 15, Oct., 1920—Yahuarmayo, Sierra de Carabaya, southeastern Peru (type in Munich Museum); idem, Arch. Naturg., 85, A, Heft 10, p. 8, 1920—Yahuarmayo, Peru, and "Bogotá," Colombia (crit.).

*Hylophilus thoracicus* (not of Temminck) Sclater, Ibis, 1881, p. 297—part, "Colombia int. (Bogotá)."

*Hylophilus thoracicus griseiventris* Berlepsch and Hartert, Nov. Zool., 9, p. 11, 1902—part, "Bogotá."

<sup>1</sup> There is remarkably little variation among the ten specimens before us. In opposition to what obtains in *H. t. aemulus* and *H. t. griseiventris*, they all have the temporal region and sides of the neck dingy grayish, the cheeks pale gray freckled with white, and the auriculars soiled brownish gray, very rarely with a slight olivaceous tinge, which is, however, much less pronounced than in the allied races. *H. t. thoracicus* differs, besides, by somewhat duller greenish upper parts, grayish (instead of warbler green) sides of the head, more whitish throat, brighter yellow (wax yellow rather than pyrite yellow) pectoral band, more buffy instead of pale grayish abdomen, much longer tail, and darker horn-color (plumbeous in life, according to Natterer) bill and feet. Wing, 57–61, (female) 55–58; tail, 55–60; bill, 12–13.

**Material examined.**—Rio de Janeiro: Sapitiba, 2; Manguinhos, 1; Rio de Janeiro, 7.

<sup>2</sup> *Hylophilus thoracicus aemulus* (Hellmayr): Similar to *H. t. griseiventris* in proportion of tail and pale-colored bill and feet; but occiput and hind neck mainly dull warbler green with very little grayish suffusion; throat more whitish; pectoral band brighter yellow as well as more extensive; posterior under parts medially more whitish, only the sides shaded with grayish. Wing, 54–58; tail, 46–48; bill, 12–13.

By the coloration of the under parts this race forms the passage to *H. t. thoracicus*, partaking, as it does, of the whitish throat and wide bright yellow pectoral band; but aside from its shorter tail and greenish instead of grayish occiput and hind neck, it may be also distinguished by the less buffy, laterally distinctly grayish belly. "Bogotá" skins seem to be inseparable. An immature bird from Rioja has dusky feet and bill, showing this character to be only of relative value.

**Material examined.**—Colombia: "Bogotá," 3.—Peru: Rioja, 2; Yahuarmayo, Carabaya, 1.

*Pachysylvia thoracica griseiventris* Hellmayr, Nov. Zool., 15, p. 21, 1908—part, "Bogotá."

*Pachysylvia griseiventris aemula* Todd, Proc. Biol. Soc. Wash., 42, p. 190, 1929—"Bogotá," Colombia; La Pampa and La Rioja, Peru (monog.).

*Range*.—Tropical zone along the eastern base of the Andes, from Colombia ("Bogotá") to southeastern Peru.

3: Colombia ("Bogotá," 1); Peru (Rioja, 2).

***Hylophilus thoracicus griseiventris* Berlepsch and Hartert.<sup>1</sup>**  
GRAY-BELLIED HYLOPHILUS.

*Hylophilus thoracicus griseiventris* Berlepsch and Hartert, Nov. Zool., 9, p. 11, 1902—Suapure, Caura River, Venezuela (type in Tring Museum examined).

*Pachysylvia thoracica griseiventris* Ihering and Ihering, Cat. Faun. Braz., 1, p. 336, 1907—part, Venezuela and Guiana; Hellmayr, Nov. Zool., 15, p. 21, 1908—part, Cayenne, Surinam, British Guiana (Bartica Grove, Camacusa, River Caramang), and Venezuela (Suapure and La Pricion, Caura) (crit.); Berlepsch, l.c., p. 315, 1908—Cayenne; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 156, 1916—Suapure and La Pricion, Caura River, Venezuela.

*Pachysylvia griseiventris* Beebe, Trop. Wild Life, 1, p. 136, 1917—Bartica Grove, British Guiana; Chubb, Bds. Brit. Guiana, 2, p. 394, 1921—British Guiana (Ituribisci River, Supenaam, Bartica, Makouria River, Abary River, River Caramang, Camacusa).

*Pachysylvia griseiventris griseiventris* Todd, Proc. Biol. Soc. Wash., 42, p. 189, 1929—French Guiana (Tamanoir, Pied Saut) and Brazil (Obidos; São Paulo do Olivença; Hyutanahan, Nova Olinda, and Arimã, Rio Purús) (monog.).

*Hylophilus thoracicus* (not of Temminck) Sclater, Cat. Coll. Amer. Bds., p. 44, 1862—Cayenne; idem, Ibis, 1881, p. 297—part, Cayenne and British Guiana; Gadow, Cat. Bds. Brit. Mus., 8, p. 307, 1883—part, A. Northern race, Bartica Grove, British Guiana; Salvin, Ibis, 1885, p. 204—Bartica Grove and Camacusa, British Guiana; Penard, Vog. Guyana, 2, p. 535, 1910—Surinam.

<sup>1</sup> *Hylophilus thoracicus griseiventris* Berlepsch and Hartert: Similar to *H. t. thoracicus*, but tail considerably shorter; bill and feet paler brownish; auriculars and orbicular region dull warbler green instead of grayish; jugular band narrower and duller, pyrite yellow rather than wax yellow; throat and posterior under parts white with a decided grayish shade. Wing, 56–60, (female) 52–55; tail, 44–50; bill, 11½–13.

Specimens from the Rio Purús and São Paulo de Olivença are stated by Todd to vary to a certain extent in the direction of *H. t. aemulus*. Guianan examples are in every respect similar to those from the Caura River. Mr. Todd not only separates this bird specifically from *H. thoracicus*, but goes even so far as to place between them *H. pectoralis* and *H. sclateri*, an arrangement which, according to my views, merely serves to obscure their natural affinities.

*Material examined*.—French Guiana: Cayenne, 1.—Dutch Guiana: "Interior of Surinam," 1.—British Guiana: Bartica Grove, 4; Camacusa, 1; River Caramang, 1; unspecified, 1.—Venezuela, Caura Valley: Suapure, 1; La Pricion, 1.

*Range*.—French, Dutch, and British Guiana, and eastern Venezuela (Caura Valley), south to northern Brazil (Obidos; São Paulo de Olivença, Rio Solimões; Rio Purús).

**\**Hylophilus semicinereus*<sup>1</sup> *semicinereus* Sclater and Salvin.  
GRAY-NAPED HYLOPHILUS.**

*Hylophilus semicinereus* Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 570, pl. 30, fig. 2—Pará (type in coll. of P. L. Sclater, now in British Museum, examined); Layard, Ibis, 1873, p. 377—Pará; Sclater, Ibis, 1881, p. 308—Pará (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 312, 1883—Pará (descr.).

*Pachysylvia thoracica semicinerea* Hellmayr, Nov. Zool., 13, p. 355, 1906—Santo Antonio do Prata, Pará (crit.); Ihering and Ihering, Cat. Faun. Braz., 1, p. 336, 1907—Pará; Hellmayr, Nov. Zool., 14, p. 5, 1907—Itaitúba, Rio Tapajóz, Borba and Salto do Girão, Rio Madeira (crit.); idem, l.c., 15, p. 21, 1908—lower Amazon, from Pará to the Rio Madeira (crit.); idem, l.c., 17, p. 266, 1910—Santa Izabel, Rio Preto; idem, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, p. 87, 1912—Pará localities; Beebe, Zoologica (N.Y.), 2, p. 96, 1916—Utinga, Pará; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 172, 1928—Pará.

*Pachysylvia semicinerea* Snethlage, Journ. Orn., 56, p. 497, 1908—Itaitúba, Rio Tapajóz; idem, l.c., 61, p. 518 (in text), 1913 (ecology); idem, Bol. Mus. Goeldi, 8, p. 476, 1914—part, Pará, Mocajutuba, Providencia, Ananindeuba, Benevides, Maguary, Rio Guamá (Santa Maria do São Miguel, Ourém), Rio Tocantins (Cametá, Baião, Arumatheua), Rio Iriri (Santa Julia), and Rio Tapajóz (Boim, Itaitúba); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 261, 1929—Tury-assú, Maranhão (crit.).

*Pachysylvia semicinerea semicinerea* Todd, Proc. Biol. Soc. Wash., 42, p. 190, 1929—Brazil, south of the Amazon, from the Rio Madeira east to Maranhão (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 334, 1930—Barão Melgaço, Matto Grosso.

*Hylophilus thoracicus* (not of Temminck) Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Salto do Girão and Borba, Rio Madeira (spec. examined).

*Pachysylvia thoracica griseiventris* (not *Hylophilus thoracicus griseiventris* Berlepsch and Hartert) Ihering and Ihering, Cat. Faun. Braz., 1, p. 336, 1907—part, Borba, Rio Madeira.

<sup>1</sup> *Hylophilus semicinereus*, which I formerly regarded as a race of *H. thoracicus*, seems to be specifically distinct, since a closely allied representative, *H. s. viridiceps*, has been found living side by side with *H. t. griseiventris* in certain districts north of the Amazon. Though similar in general coloration, it may be distinguished from the last-named bird by lacking the yellowish jugular band and by having the auriculars as well as the sides of the neck grayish instead of greenish.

Specimens from the Tapajóz and Rio Madeira are obviously inseparable from Pará birds, as has already been pointed out by Mr. Todd (l.c., p. 191).

*Material examined*.—Maranhão: Tury-assú, 1.—Pará: Pará, 5; Santo Antonio do Prata, 2; Itaitúba, Rio Tapajóz, 1.—Amazonas: Borba, 2; Salto do Girão, 1; Santa Izabel, Rio Preto, Rio Madeira, 2.

**Range.**—Northern Brazil, south of the Amazon, from northern Maranhão (Tury-assú) to the Rio Madeira, south to northern Matto Grosso (Barão Melgaço).

1: Brazil (Tury-assú, Maranhão, 1).

***Hylophilus semicinereus viridiceps* (Todd).<sup>1</sup> GREEN-HEADED HYLOPHILUS.**

*Pachysylvia semicinerea viridiceps* Todd, Proc. Biol. Soc. Wash., 42, p. 191, 1929—Pied Saut, French Guiana (type in Carnegie Museum, Pittsburgh).

*Pachysylvia semicinerea* (not *Hylophilus semicinereus* Sclater and Salvin) Snethlage, Bol. Mus. Goeldi, 8, p. 476, 1914—part, Rio Jary (Santo Antonio da Cachoeira), Obidos, and Rio Jamundá (Faro).

*Pachysylvia thoracicus semicinerea* Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 157, 1916—foot of Mount Duida, Venezuela (spec. examined).

**Range.**—French Guiana (Pied Saut, Oyapock) and southern Venezuela (foot of Mount Duida, upper Orinoco), south to the north bank of the Amazon (Rio Jary; Obidos; Rio Jamundá; Manacapurú).

***Hylophilus flaviventris* Cabanis.<sup>2</sup> YELLOW-BELLIED HYLOPHILUS.**

*Hylophilus flaviventris* Cabanis, Journ. Orn., 21, p. 64, 1873—Monterico, Dept. Ayacucho, Peru (type formerly in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 159, 1927); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Monterico; Sclater,

<sup>1</sup>*Hylophilus semicinereus viridiceps* (Todd): Very similar to *H. s. semicinereus*, but dorsal surface duller, less yellowish green; the greenish suffusion on the sides of the chest less extensive as well as duller in tone; the median portion of breast and abdomen slightly more whitish, less tinged with grayish. Size about the same.

This is a very unsatisfactory race, not one of the above-mentioned characters being absolutely constant. For instance, a specimen from French Guiana (Pied Saut) is very nearly as bright yellowish green as Pará birds, one of which, furthermore, has hardly more greenish on the lateral portions of the chest, while one from Borba, Rio Madeira, has the abdominal line fully as whitish as northern examples. In the coloration of the pileum and hind neck I fail to appreciate any difference, gray-naped individuals as well as others with nearly uniform greenish upper part of the head being equally represented in the series of both forms.

**Material examined.**—French Guiana: Pied Saut, Oyapock, 2.—Brazil: Obidos, 1; Manacapurú, 1.—Venezuela: foot of Mount Duida, 1.

<sup>2</sup>*Hylophilus flaviventris* Cabanis: Pileum and nape (abruptly defined posteriorly) light earthy brown with a slight olivaceous tinge, caused by certain feathers being laterally edged with dull yellowish olive; back brownish olive green; rump and upper tail coverts clearer, light yellowish olive green, contrasting with the more brownish mantle; lesser wing coverts brownish like the upper back; median and greater coverts duller, more of a brownish gray, edged with greenish; remiges dusky, exteriorly margined with yellowish olive green, this margin passing into whitish along the apical half on the second to the sixth primaries; rectrices dull olive yellowish green, brighter on the edges; lores and orbital rim dingy white; sides of the head pale earthy brown, slightly variegated with whitish on cheeks and auriculars; throat and foreneck white, dingier laterally and posteriorly; remainder of under surface pale olive yellow (rather dull in tone), the flanks more

Ibis, 1881, p. 302—Monterico (crit.); Gadow, Cat. Bds. Brit. Mus., 8, p. 309, 1883—central Peru; Taczanowski, Orn. Pér., 1, p. 446, 1884—Monterico.

*Pachysylvia flaviventris* Todd, Proc. Biol. Soc. Wash., 42, p. 187, 1929—Monterico (monog.).

**Range.**—Tropical zone of central Peru, in Dept. Ayacucho (Monterico, east of Huanta).

**\**Hylophilus pectoralis* Sclater.<sup>1</sup> CINEREOUS-HEADED HYLOPHILUS.**

*Hylophilus pectoralis* Sclater, Proc. Zool. Soc. Lond., 1866, p. 321—"in Brazil merid. prov. Mattogrosso [et Rio de Janeiro," errore] (the type, an adult male obtained by Natterer in October, 1826, at Villa Bella de Matto Grosso, in coll. of P. L. Sclater, now in British Museum, examined); Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Villa Maria and [Villa Bella del Mattogrosso (Matto Grosso), Forte do Rio Branco, and Rio Amazonas, Brazil (spec. examined); Sclater, Ibis, 1881, p. 298—Matto Grosso

greenish and the crissum more yellowish; axillars and under wing coverts pale yellowish; inner margin to remiges nearly white. Bill pale horn brown, lighter below; feet dark horn. Wing (adult), 62; tail, 49; bill, 14; tarsus, 16.

This is a very peculiar species, not to be confused with any other member of the genus, and is particularly well characterized by its elongated, slender bill. By possessing a distinct cap, this species approaches *H. pectoralis*, but has a much longer, slenderer bill and considerably longer wings. It differs, besides, by brownish mantle, much duller olive yellow ventral surface without any white on the abdomen, earthy brown instead of clear gray head, etc.

The above description was made from the type specimen long before its loss, when it was forwarded to me for inspection from the Warsaw Museum through the good offices of the late M. Jean Stolzmann.

<sup>1</sup>*Hylophilus pectoralis* Sclater differs from *H. thoracicus* (all races) by lacking the olivaceous color on forehead and anterior crown, the whole pileum being uniform light mouse gray like the sides of the head. The yellow pectoral area is even brighter and more extensive than in *H. t. thoracicus*, but otherwise the colors are about the same in both.

The present bird is obviously specifically distinct, since its range partly coincides with that of *H. t. griseiventris*.

Subdivision of *H. pectoralis* seems to be impracticable. While two adults from Matto Grosso (Villa Maria) and one from Leopoldina, Goyaz, have paler bills and the yellow area underneath deeper in tone, the original specimens from Villa Bella, Matto Grosso, as well as the type of *P. araguayae* do not materially differ from a Guianan series. Moreover, birds from northern Maranhão vary considerably inter se, and one, an adult male from Tury-assú, very nearly matches the dark-breasted individuals mentioned above. The type of *P. thoracicus* (!) *abariensis* Chubb, which we have examined in the British Museum, is a perfectly normal specimen of *H. pectoralis*, agreeing particularly well with Sclater's original example from Villa Bella. If two forms were distinguishable, the northern one would be entitled to the name *griseiceps* Penard, based on Surinam birds.

**Additional material examined.**—Brazil: Matto Grosso, Villa Bella, 1 (the type); Villa Maria [=São Luiz de Cáceres], 2; Leopoldina, Rio Araguaia, 2; Rio Amazonas, 1; Santarém, 1; Forte do São Joaquim, Rio Branco, 1; Fazenda Nazareth, Mexiana, 3.—British Guiana: Abary River, 1; Annai, 3; Quonga, 1.—Dutch Guiana: Paramaribo, 7; Kwata, 2; Rijweg, 1.—French Guiana: Cayenne, 4; Roche-Marie, 1.

(monog.); Berlepsch and Hartert, Nov. Zool., 9, p. 12 (in text), 1902 (crit.); Hagmann, Zool. Jahrb. (Syst.), 26, p. 25, 1907—Mexiana.

*Hylophilus thoracicus* (not of Temminck) Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Matto Grosso; Gadow, Cat. Bds. Brit. Mus., 8, p. 307, 1883—part, B. "Southern race (*H. pectoralis*)," "interior of southern Brazil."

*Pachysylvia pectoralis* Hellmayr, Nov. Zool., 13, p. 356 (in text), 1906 (range, crit.); Ihering and Ihering, Cat. Faun. Braz., 1, p. 336, 1907—Santarém (range); Hellmayr, Nov. Zool., 15, pp. 20, 22, 1908—Rio Araguaia, Goyaz (range, crit.); Berlepsch, l.c., 15, p. 108, 1908—Cayenne and Roche-Marie, French Guiana, and Monte Alegre, Brazil; Hellmayr, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, pp. 99, 118, 1912—Mexiana; Snethlage, Journ. Orn., 61, p. 518, 1913 (ecology); idem, Bol. Mus. Goeldi, 8, p. 475, 1914—Quati-purú, Rio Tocantins (Ilha Pae Lourenço), Marajó (Pacoval), Mexiana, Arumanduba, and Monte Alegre; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 82, 1918—Paramaribo, Surinam; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 59, 1926—Anil and Tury-assú, Maranhão; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 262, 1929—Tury-assú, Rosario, and Codó, Cocos, Maranhão (crit.); Todd, Proc. Biol. Soc. Wash., 42, p. 188, 1929 (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 335, 1930—Matto Grosso (ex Pelzeln).

*Hylophilus griseiceps* Penard and Penard, Vog. Guyana, 2, p. 538, 1910—Surinam (location of type not stated).

*Hylophilus sclateri* (not of Salvin and Godman) Penard and Penard, Vog. Guyana, 2, p. 535, 1910—Surinam (nest and eggs descr.).

*Pachysylvia araguayae* Reichenow, Journ. Orn., 68, p. 88, 1920—Leopoldina, Rio Araguaia, Goyaz, Brazil (type in Berlin Museum examined).

*Pachysylvia thoracicus abariensis* Chubb, Bds. Brit. Guiana, 2, p. 395, 1921—Abary River, Supenaam, Bartica, Bonasica, Annai, and Quonga, British Guiana (type, from Abary River, in McConnell Collection, now in British Museum, examined).

**Range.**—French, Dutch, and British Guiana, and Brazil from the Rio Branco east to northern Maranhão and south to western Matto Grosso (Villa Bella, São Luiz de Cáceres) and Goyaz (Leopoldina, Rio Araguaia).

13: British Guiana (Georgetown, 2; unspecified, 1); Brazil (Bôa Vista, Rio Branco, 3; Tury-assú, Maranhão, 4; Rosario, Maranhão, 2; Codó, Cocos, Maranhão, 1).

### ***Hylophilus sclateri* Salvin and Godman.<sup>1</sup> SCLATER'S HYLOPHILUS.**

<sup>1</sup>*Hylophilus sclateri* Salvin and Godman, though not unlike *H. pectoralis* in some respects, viz. the uniform gray pileum and sides of the head, is nevertheless quite distinct specifically. Besides being larger, it differs by having the forehead and lores tinged with clay color; mouse gray instead of warbler green upper tail coverts, tail, and wing edgings; buffy white throat; narrower and darker, primuline yellow jugular band, etc. Wing, 63–65, (female) 58–62; tail, 53–56, (female) 49–52; bill, 11–12.

**Material examined.**—British Guiana: Roraima, 8.

*Hylophilus sclateri* Salvin and Godman, Ibis, (5), 1, p. 205, 1883—Roraima, British Guiana (type in Salvin-Godman Collection, now in British Museum); Salvin, Ibis, 1885, p. 204—Camacusa and Roraima; idem, Ibis, 1886, p. 500—Mount Twek-quay.

*Pachysylvia sclateri* Chubb, Bds. Brit. Guiana, 2, p. 397, 1921—Roraima and Camacusa, British Guiana; Todd, Proc. Biol. Soc. Wash., 42, p. 189, 1929—Mount Roraima (monog.); Chapman, Bull. Amer. Mus. N. H., 63, p. 113, 1931—Mount Roraima (Paulo, Arabupu, Philipp Camp) and Mount Duida (north of Laterite Valley).

**Range.**—Upper Tropical and Subtropical zones of British Guiana (Camacusa; Mount Twek-quay; Roraima) and Venezuela (Laterite Valley, Mount Duida).

***Hylophilus muscicapinus*<sup>1</sup> *muscicapinus* Sclater and Salvin.  
FLYCATCHER-LIKE HYLOPHILUS.**

*Hylophilus muscicapinus* Sclater and Salvin, Nomencl. Av. Neotrop., p. 156, 1873—St. Louis d'Oyapock, French Guiana (type in coll. of P. L. Sclater, now in British Museum); Sclater, Ibis, 1881, p. 300, pl. 10, fig. 1—Oyapock and British Guiana (Corentyne River and Bartica Grove) (monog.); Salvin, Cat. Strickl. Coll., p. 113, 1882—Cayenne; Gadow, Cat. Bds. Brit. Mus., 8, p. 308, 1883—Bartica Grove; Salvin, Ibis, 1885, p. 204—Bartica Grove; Berlepsch and Hartert, Nov. Zool., 9, p. 12, 1902—Suapure, La Union, and Nicare, Caura River, Venezuela; Penard and Penard, Vog. Guyana, 2, p. 535, 1910—Surinam.

*Pachysylvia muscicapina* Berlepsch, Nov. Zool., 15, p. 315, 1908—Saint Louis d'Oyapock, French Guiana; Snethlage, Bol. Mus. Goeldi, 8, p. 476, 1914—Rio Jary (Santo Antonio da Cachoeira) and Obidos; Beebe, Trop. Wild Life, 1, p. 136, 1917—Bartica Grove; Chubb, Bds. Brit. Guiana, 2, p. 396, 1921—Ituribisci, Supenaam, and Bartica, British Guiana.

*Pachysylvia muscicapina muscicapina* Hellmayr, Nov. Zool., 17, p. 268, 1910—French, Dutch, and British Guiana, and Venezuela (Caura Valley); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 157, 1916—Venezuela (Caura River and foot of Mount Duida); Todd, Proc. Biol. Soc. Wash., 42, p. 203, 1929—Guiana and eastern Venezuela, south to Obidos, north bank of lower Amazon (monog.).

**Range.**—French, Dutch, and British Guiana, and southern Venezuela (Caura Valley; Rio Cunucunuma, at the foot of Mount

<sup>1</sup>*Hylophilus muscicapinus* is rather an isolated species with very long bill and peculiar coloration. By certain characters, such as the rufescent forehead and lores, it recalls *H. sclateri*, but has a proportionately shorter tail and longer bill. Furthermore, it differs by buffy rufous (instead of grayish) sides of the head and superciliaries; green (not mouse gray) upper tail coverts, tail, and wing edgings; buffy rufous instead of primuline yellow foreneck, etc. Wing, 58–61, (female) 55–57; tail, 46–49, (female) 44–47; bill, 13½–15.

Birds from the Caura Valley agree well with others from the Guianas.

**Material examined.**—French Guiana: Cayenne, 1.—Dutch Guiana: inland of Paramaribo, 2.—British Guiana: Camacusa, 2; Bartica Grove, 1.—Venezuela, Caura Valley: La Union, 2; Suapure, 6; Nicare, 1.



Duida), south to the north bank of the lower Amazon, Brazil (Rio Jary; Obidos).

***Hylophilus muscicapinus griseifrons* (Snethlage).<sup>1</sup> GREY-FRONTED HYLOPHILUS.**

*Pachysylvia muscicapina griseifrons* Snethlage, Orn. Monatsber., 15, p. 160, 1907—Villa Braga, Rio Tapajóz (type in Museu Goeldi, Pará, now in Berlin Museum); idem, Journ. Orn., 56, p. 497, 1908—Villa Braga; Hellmayr, Nov. Zool., 17, p. 268, 1910—Maroins, Rio Machados, Rio Madeira (crit.); Snethlage, Bol. Mus. Goeldi, 8, p. 476, 1914—Boim and Villa Braga, Rio Tapajóz; Todd, Proc. Biol. Soc. Wash., 42, p. 203, 1929—Rio Tapajóz (Villa Braga, Apacy) to the Rio Madeira (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 335, 1930—Rio Roosevelt, Broken Canoe Rapids, and Monte Cristo, Matto Grosso.

*Range*.—Brazil south of the Amazon, from the Rio Tapajóz west to the Rio Madeira, south to northern Matto Grosso (Rio Roosevelt).

***Hylophilus brunneiceps brunneiceps* Sclater.<sup>2</sup> BROWN-HEADED HYLOPHILUS.**

*Hylophilus brunneiceps* Sclater, Proc. Zool. Soc. Lond., 1866, p. 322—"in Brasil. merid., Ypanema (Natterer)," errore (type from the Rio Vaupé, a tributary of the upper Rio Negro,\* in coll. of P. L. Sclater, now in British Museum, examined); Pelzeln, Orn. Bras., 2, p. 70, 1868—Rio Vaupé and Barcellos, Rio Negro; Sclater, Ibis, 1881, p. 305, pl. 11, fig. 1—Rio Negro and "Oyapock, Guiana" (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 310, 1883—"Guiana"; Berlepsch and Leverkühn, Ornith., 6, p. 7, 1890—"Angostura," Orinoco (crit.; spec., now in Berlin Museum, examined); Penard and Penard, Vog. Guyana, 2, p. 537, 1910—"Guiana."

<sup>1</sup>*Hylophilus muscicapinus griseifrons* (Snethlage): Differs from the typical race by slightly brighter green upper parts, deeper isabelline-rufous sides of the head, more rufescent throat, and especially by having the forehead gray like the crown, not tinged with buffy. Wing (male), 59–62; tail, 45–47; bill, 13–14.

Birds from Maroins, east side of the Rio Madeira, agree well with a topotype from Villa Braga.

*Material examined*.—Brazil: Villa Braga, Rio Tapajóz, 1; Maroins, Rio Machados, 2.

<sup>2</sup>A very distinct species, easily recognizable by its brown (raw umber to light sepia) head (the sides being somewhat paler than the top), very pale brownish throat and foreneck, while a "male" from San Fernando de Atabapo has these parts washed with olive buff. Wing, 56–57, (female) 53–54; tail, 41–46; bill, 12–13.

Four specimens from the upper Rio Negro agree very well together. An adult said to be from "Angostura," Orinoco, differs by paler, more grayish buff throat and foreneck, while a "male" from San Fernando de Atabapo has these parts washed with olive buff. Wing, 56–57, (female) 53–54; tail, 41–46; bill, 12–13.

*Material examined*.—Brazil, Rio Negro: Barcellos, 1; Rio Vaupé, 3.—Venezuela: "Angostura," 1; San Fernando de Atabapo, 1.

<sup>3</sup>According to the registers of the Vienna Museum, the type, a male, was obtained by Natterer on the Rio Vaupé on July 20, 1831.

*Pachysylvia brunneiceps* Ihering and Ihering, Cat. Faun. Braz., 1, p. 337, 1907—"Guyana," "Amazonia," Rio Negro; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 157, 1916—San Fernando de Atabapo, upper Orinoco; Todd, Proc. Biol. Soc. Wash., 42, p. 192, 1929—Rio Negro to southern Venezuela (monog.).

*Range*.—Northwestern Brazil (upper Rio Negro and its tributaries) and the adjoining section of southern Venezuela (San Fernando de Atabapo, upper Orinoco).<sup>1</sup>

***Hylophilus brunneiceps inornatus* (Snethlage).<sup>2</sup> SOUTHERN BROWN-HEADED HYLOPHILUS.**

*Pachysylvia inornata* Snethlage, Orn. Monatsber., 22, p. 43, 1914—Cametá, Rio Tocantins, Brazil (type in Museu Goeldi, Pará, now in Berlin Museum, examined); idem, Bol. Mus. Goeldi, 8, pp. 478, 499, 1914—Cametá, Rio Tocantins, and Santa Elena, Rio Jamauchim; Todd, Proc. Biol. Soc. Wash., 42, p. 202, 1929—Rio Tapajóz to the Tocantins (monog.).

*Range*.—Northern Brazil south of the Amazon, from the Rio Tocantins to the Rio Tapajóz.

***Hylophilus semi-brunneus* Lafresnaye.<sup>3</sup> RUFOUS-NAPED HYLOPHILUS.**

<sup>1</sup> The locality "Oyapock," French Guiana, is doubtless erroneous. I have reason to believe that the collection, containing the two specimens in the British Museum, received from Madame Verdey of Paris, actually originated from the upper Orinoco. Todd also states that Klages failed to meet with the species in French Guiana. It is likewise questionable whether *H. b. brunneiceps* descends the Orinoco as far as "Angostura," whence the Berlin Museum has an example, acquired from the natural history dealer Brandt, of Hamburg. It is more likely to have been obtained farther up the river.

<sup>2</sup> *Hylophilus brunneiceps inornatus* (Snethlage): Very close to *H. b. brunneiceps*, but with slightly longer wings; throat nearly grayish white, not washed with buffy or brownish; the remainder of the under parts more or less strongly washed with yellowish citrine. Wing, 56–58; tail, 42–46; bill, 12–13.

This is a slightly differentiated race, representing *H. b. brunneiceps* south of the lower Amazon, and distinguished by more grayish or whitish throat and yellowish abdomen. Certain specimens from the Rio Tapajóz, which we have seen in the collection of the Carnegie Museum, run rather close to the "Angostura" bird mentioned under the preceding heading. Mr. Todd places this form in the vicinity of *H. hypoxanthus*, but we cannot see that the two species have anything in common except a superficial resemblance in the coloration of the pileum.

*Material examined*.—Brazil: Cametá, Rio Tocantins, 1 (the type); Santa Elena, Rio Jamauchim, 1; Rio Tapajóz, 6.

<sup>3</sup> *Hylophilus semi-brunneus* Lafresnaye is allied to, possibly even conspecific with, *H. aurantiifrons*, its close resemblance in the immature plumage to the latter bird affording strong evidence for such relationship.

A single topotype from eastern Ecuador (San José de Sumaco) is so closely matched by various Colombian examples that I am inclined to agree with Mr. Todd in not maintaining *P. s. leucogastra*.

*Material examined*.—Colombia: "Bogotá," 10; Primavera, Cauca, western Andes, 4; Miraflores, 2.—Ecuador: below San José de Sumaco, 1.

*Hylophilus semi-brunneus* Lafresnaye, Rev. Zool., 8, p. 341, 1845—Bogotá, Colombia (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 345, 1930); Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—Bogotá; Baird, Rev. Amer. Bds., 1, p. 374, 1866—Bogotá; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Concordia, Antioquia; Sclater, Ibis, 1881, p. 302—Bogotá and Concordia, Colombia (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 309, 1883—Colombia.

*Pachysylvia semibrunnea* Chapman, Bull. Amer. Mus. N. H., 36, p. 540, 1917—Las Lomitas, San Antonio, La Manuelita, Miraflores, San Agustín, and Fusugasugá, Colombia; Todd, Proc. Biol. Soc. Wash., 42, p. 201, 1929—Colombia and eastern Ecuador (monog.).

*Pachysylvia semibrunnea leucogastra* Chapman, Amer. Mus. Nov., 143, p. 1, 1924—below San José de Sumaco, eastern Ecuador (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 588, 1926—same locality.

*Range.*—Subtropical zone of Colombia (except Santa Marta region) and eastern Ecuador.

### ***Hylophilus aurantiifrons aurantiifrons* Lawrence. OCHER-FRONTED HYLOPHILUS.**

*Hylophilus aurantiifrons* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 324, 1861—Panama Railroad (type in coll. of G. N. Lawrence, now in the American Museum of Natural History, New York); Baird, Rev. Amer. Bds., 1, p. 377, 1866—Panama (descr.); Sclater, Ibis, 1881, p. 303—part, Panama (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 207, 1882—part, Panama Railroad; Gadow, Cat. Bds. Brit. Mus., 8, p. 310, 1883—part, Panama; Bangs, Proc. Biol. Soc. Wash., 12, p. 142, 1898—Santa Marta, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 172, 1900—Bonda, Santa Marta.

*Hylophilus hypoxanthus* (not of Pelzeln) Salvin and Godman, Ibis, 1880, p. 118—Valencia, Santa Marta region.

*Pachysylvia aurantiifrons aurantiifrons* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 220, 1904—from Santa Marta to Panama (monog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 220, 1906—savanna of Panama; Hellmayr, Nov. Zool., 13, p. 12, 1906—Panama to Santa Marta (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Pedro Miguel, Panama; Todd and Carriker, Ann. Carnegie Mus., 14, p. 430, 1922—Bonda, Don Diego, Dibulla, Fundación, Minca, Mamatoco, La Tigrera, Tucurínca, and Valencia, Santa Marta region (habits); Hallinan, Auk, 41, p. 324, 1924—Rio Velazquez, Panama; Todd, Proc. Biol. Soc. Wash., 42, p. 199, 1929—Caribbean coast of Colombia to Panama (monog.); Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1931—Rio Frio, Magdalena.

*Range.*—Caribbean coast region of Colombia, west to the Isthmus of Panama (Canal Zone).<sup>1</sup>

<sup>1</sup> Specimens from the Santa Marta region seem identical with Panama birds.

*Material examined.*—Panama: Panama, 3.—Colombia, Santa Marta: Mamatoco, 2; Bonda, 8; Minca, 3.

**\**Hylophilus aurantiifrons saturatus* (Hellmayr).<sup>1</sup> EASTERN OCHER-FRONTED HYLOPHILUS.**

*Pachysylvia aurantiifrons saturata* Hellmayr, Nov. Zool., 13, p. 12, 1906—Caparo, Trinidad, and vicinity of Cumaná, Venezuela (no type locality indicated; type from Rincon de San Antonio, State of Sucre, northeastern Venezuela, in Tring Museum); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 188, 1906—Aripo, Trinidad; idem, l.c., p. 357, 1908—Pointe Gourde, Carenage, and Aripo, Trinidad; Beebe, Zoologica (N.Y.), 1, p. 100, 1909—Guanoco, Gulf of Paria, Venezuela; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 49, 1912—Las Quiguas, Carabobo (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 207, 1913—Cariaquito, Paria Peninsula, Venezuela; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 156, 1916—Guanoco, Venezuela (ex Beebe); Todd, Proc. Biol. Soc. Wash., 42, p. 200, 1929—Caribbean coast of Venezuela, east to Trinidad, south to Colombia east of the eastern Andes (monog.).

*Hylophilus insularis* (not of Sclater) Léotaud, Ois. Trinidad, p. 186, 1866—Trinidad; Sclater, Ibis, 1881, p. 305—part, Trinidad (ex Léotaud).

*Hylophilus hypoxanthus* (not of Pelzeln) Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 627, 629—San Esteban, Carabobo.

*Pachysylvia aurantiifrons hypoxantha* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 215, 1904—part, Venezuela, Trinidad, and "Guiana" (crit.).

*Hylophilus aurantiifrons* (not of Lawrence) Sclater, Ibis, 1881, p. 303—part, "Guiana (?)," Trinidad, and Venezuela (San Esteban, Valencia); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 207, 1882—part, Venezuela and "Guiana"; Gadow, Cat. Bds. Brit. Mus., 8, p. 310, 1883—part (descr.); Chapman, Bull. Amer. Mus. N. H., 6, p. 27, 1894—Princes-town, Trinidad; Phelps, Auk, 14, p. 364, 1897—Cumaná, San Antonio, and Guanaguana, Venezuela; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 177, 1901—San Julián, near La Guaira, Venezuela.

**Range.**—Island of Trinidad and Caribbean coast district of Venezuela, from Sucre west to Zulia; (?) eastern Colombia (Palmar, Boyacá, eastern base of the eastern Andes).<sup>2</sup>

<sup>1</sup> *Hylophilus aurantiifrons saturatus* (Hellmayr): Very close to *H. a. aurantiifrons*, but under parts brighter yellow and more strongly tinged with buffy or ochraceous across the chest.

Comparison of large series from Trinidad and the Venezuelan mainland tends to demonstrate their identity. Neither is the pileum duller, nor are the under parts paler in Venezuelan birds, as has been claimed by Ridgway, who had, however, very little material. While individual specimens are not always distinguishable from *aurantiifrons*, the more richly colored under parts render the present form quite recognizable, when series are laid out side by side.

**Additional material examined.**—Trinidad: Caparo, 14; Chaguaramas, 1; Icacos, 2; Aripo, 8.—Venezuela, Sucre: Cumaná, 6; San Antonio, 1; Quebrada Secca, 1; Santa Ana, 2; Celci Puede, 1; Los Palmales, 1; La Tigrera, 3; Campos Alegre, 3; Carabobo, Las Quiguas, 3; Cumbre Chiquita, 1; San Esteban, 2; Tucacas, 1.

<sup>2</sup> According to Todd (l.c.), a single specimen from the above locality seems to be referable to *H. a. saturatus*. More material is, however, needed to establish its subspecific identity beyond doubt. "Guiana," indicated for this *Hylophilus* by certain early writers, refers to specimens of the so-called "Trinidad-make." The species does not occur anywhere in Guiana proper.

14: Trinidad, 1; Venezuela (Caracas, 9; Lake Valencia, 1; Maracay, Aragua, 3).

***Hylophilus hypoxanthus hypoxanthus* Pelzeln.<sup>1</sup> DUSKY-CAPPED HYLOPHILUS.**

*Hylophilus hypoxanthus* Pelzeln, Orn. Bras., 2, pp. 71, 136, 1868—Rio Içanna and Rio Vaupé, upper Rio Negro, Brazil (types in Vienna Museum examined).

*Hylophilus fuscicapillus* Sclater and Salvin, Proc. Zool. Soc. Lond., 1880, p. 155—Sarayacu, eastern Ecuador (type in coll. of P. L. Sclater, now in British Museum, examined); Sclater, Ibis, 1881, p. 303, pl. 10, fig. 2—Sarayacu; Gadow, Cat. Bds. Brit. Mus., 8, p. 309, 1883—Ecuador (descr.).

*Pachysylvia hypoxantha* Ihering and Ihering, Cat. Faun. Braz., 1, p. 337, 1907—Rio Negro and Ecuador; Snethlage, Bol. Mus. Goeldi, 8, p. 477, 1914—part, Amazonia.

*Pachysylvia hypoxantha hypoxantha* Hellmayr, Nov. Zool., 13, p. 12 (in text), 1906—Rio Içanna and Rio Negro (crit.); Todd, Proc. Biol. Soc. Wash., 42, p. 201, 1929—Tonantins and Manacapurú, Rio Solimões (monog.).

*Pachysylvia hypoxantha fuscicapilla* Hellmayr, Nov. Zool., 13, p. 12 (in text), 1906—Sarayacu, Ecuador (crit.).

*Pachysylvia fuscicapilla fuscicapilla* Chapman, Bull. Amer. Mus. N. H., 55, p. 588, 1926—Rio Suno and below San José, eastern Ecuador, and La Merced, Peru (crit.).

**Range.**—Upper Amazonia, from eastern Ecuador south to central Peru (La Merced, Chanchamayo, Dept. Junín) and east to the Rio Negro, Brazil.

<sup>1</sup>*Hylophilus hypoxanthus* Pelzeln, though related to *H. aurantiifrons*, differs nevertheless very markedly by the total absence of yellow on forehead and supraloral region; much darker, olive brown or sepia brown pileum, passing into buffy or brownish olive on the back and leaving only the rump and upper tail coverts greenish, the tone of this green as well as that of the wing coverts, tail, and wing feathers being considerably darker; dull brownish instead of bright isabella color sides of the head and neck; much more greenish yellow under parts with just a faint buffy tinge across the foreneck; paler yellow under wing coverts; narrower and more whitish inner margin to the remiges, etc. Wing, 59–60, (female) 54–57; tail, 45–46, (female) 40–43; bill, 12–13½.

Specimens from Sarayacu (*H. fuscicapillus*) are not satisfactorily separable from the female type of *H. hypoxanthus*, obtained by Natterer on the Rio Vaupé, and an adult of the same sex from Pebas, Rio Marañón, is also similar. Natterer's male example from the Rio Içanna is considerably paler yellowish beneath with a more whitish throat, doubtless an individual variation. Both Chapman and Todd mention aberrant individuals from Manacapurú, just west of the mouth of the Rio Negro, and La Merced, Peru, respectively. Without adequate series from these localities it is, of course, impossible to properly explain the significance of this variation.

**Material examined.**—Ecuador: Sarayacu, 3.—Peru: Pebas, 1.—Brazil: Rio Içanna, 1; Rio Vaupé, 1.

***Hylophilus hypoxanthus albigula* (Chapman).<sup>1</sup> WHITE-THROATED HYLOPHILUS.**

*Pachysylvia fuscicapilla albigula* Chapman, Amer. Mus. Nov., 18, p. 11, 1921—Santa Julia, Rio Irii (branch of the Xingú), Brazil (type in Museu Goeldi, Pará).

*Pachysylvia hypoxantha albigula* Todd, Proc. Biol. Soc. Wash., 42, p. 200, 1929—Brazil, south of the Amazon, from the Xingú to the Rio Purús (monog.).

**Range.**—Brazil south of the Amazon, from the Rio Xingú to the Rio Purús.

***Hylophilus olivaceus* Tschudi.<sup>2</sup> OLIVACEOUS HYLOPHILUS.**

*Hylophilus olivaceus* Tschudi, Arch. Naturg., 10, (1), p. 284, 1844—Peru (type in Neuchâtel Museum); idem, Unters. Faun. Peru., Aves, p. 195, 1846—eastern slope of the Peruvian Andes (probably Dept. Junín); Baird, Rev. Amer. Bds., 1, p. 375, 1866—Peru (ex Tschudi); Selater, Ibis, 1881, p. 310—Peru (ex Tschudi); Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 7—Huambo; Gadow, Cat. Bds. Brit. Mus., 8, p. 313, 1883—Huambo; Taczanowski, Orn. Pér., 1, p. 447, 1884—Huambo and Chirimoto, Peru (crit.); Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 75—Mapoto, Ecuador.

<sup>1</sup>*Hylophilus hypoxanthus albigula* (Chapman): Very similar to *H. h. hypoxanthus*, but under parts richer and brighter, lemon yellow rather than barium yellow, without the faint buffy tinge across the foreneck; throat generally of a purer, more grayish white, less buffy; and back brighter, brownish citrine rather than buffy olive. Wing, 58–61, (female) 55–57; tail, 45–49, (female) 43–44; bill, 12–13½.

The best character by which to recognize this form is the brighter, richer yellow color of the under parts. However, one specimen, a female from the Rio Purús (Nova Olinda), is much paler than the others, with slight whitish flammulations on the breast, and closely resembles the male of *H. hypoxanthus* from the Rio Içanna, which has also the throat very nearly as whitish.

**Material examined.**—Brazil: Caviana, Rio Solimões, 1; Rio Purús, Hyutana-han, 2; Arimã, 1; Nova Olinda, 1.

<sup>2</sup>*Hylophilus olivaceus* Tschudi, a little-known species, seems to be allied to *H. flavipes*. The proportions and the shape of the pale brown bill are about the same, and the general style of coloration, including the pale brown feet, is very similar. The Peruvian bird differs, however, by duller (yellowish olive) upper parts, more yellowish forehead, more greenish sides of the head, and uniform olive yellow under parts from chin to tail coverts, with just a few white-tipped feathers in the anal region. Wing, (male) 60½, (female) 58; tail, 55, (female) 49; bill, 13.

We have examined an adult male from Chirimoto and a molting female from Huambo, Dept. San Martín, Peru, which agree substantially with Tschudi's rather vague account. Moreover, they had been compared and found identical with the type, as stated by Taczanowski (Orn. Pér., 1, p. 447), who, at the same time, corrects some inaccuracies in Tschudi's description. On the other hand, I am not quite certain that east Ecuadorian birds are the same, judging from Chapman's and notably Todd's remarks: "Below buffy whitish, the throat, breast, and sides heavily shaded with olive yellow" and "more brownish on the pileum." Their specimens may have been immature, however, since Taczanowski (Proc. Zool. Soc. Lond., 1885, p. 75) pronounced a male from Mapoto to be "identique aux oiseaux péruviens."

**Material examined.**—Peru: Chirimoto, 1; Huambo, 1.

*Pachysylvia olivacea* Chapman, Bull. Amer. Mus. N. H., 55, p. 589, 1926—below Oyacachi and below San José, eastern Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 442, 1928—Chaco, eastern Ecuador; Todd, Proc. Biol. Soc. Wash., 42, p. 197, 1929—eastern Ecuador (monog.).

**Range.**—Subtropical zone of eastern Peru (Huambo and Chirimoto, Huayabamba Valley, Dept. San Martín) and eastern Ecuador (Mapoto; below Oyacachi; below San José).

**\*Hylophilus flavipes viridiflavus Lawrence.<sup>1</sup> YELLOW-GREEN HYLOPHILUS.**

*Hylophilus viridiflavus* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 324, 1861—line of Panama Railroad (type in coll. of G. N. Lawrence, now in the American Museum of Natural History, New York); Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad; Baird, Rev. Amer. Bds., 1, p. 380, 1866—Panama (crit.); Salvin, Proc. Zool. Soc. Lond., 1867, p. 137—Santa Fé, Veragua; idem, l.c., 1870, p. 184—Bugaba, Chiriquí; Sclater, Ibis, 1881, p. 309—Veragua and Panama (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 208, pl. 13, fig. 1, 1882—Panama (Bugaba, Santa Fé, railroad line); Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Buenos Aires, Costa Rica; Griscom, Auk, 50, p. 306, 1933—Rio Chepo, Darien.

*Hylophilus flavipes* B. Northern race (*H. viridiflavus*) Gadow, Cat. Bds. Brit. Mus., 8, p. 312, 1883—Veragua and Isthmus of Panama.

*Hylophilus flavipes viridiflavus* Bangs, Auk, 18, p. 368, 1901—Divala and David, Chiriquí.

*Pachysylvia viridiflava* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 221, 1904—Isthmus of Panama to Veragua (monog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 220, 1906—savanna of Panama; Bangs, Auk, 24, p. 305, 1907—Boruca, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 777, 1910—Pigres, El General de Térraba, Pózo Azul de Pirris, and Buenos Aires de Térraba, southwestern Costa Rica (habits); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Mount Hope and Gatun, Panama; Hallinan, Auk, 41, p. 324, 1924—Corozal, Panama; Todd, Proc. Biol. Soc. Wash., 42, p. 199, 1929—Panama and southwestern Costa Rica (monog.).

*Hylophilus viridiflavus pallescens* Davidson, Proc. Biol. Soc. Wash., 45, p. 168, 1932—near Concepción, Chiriquí, Panama (type in California Academy of Sciences).

<sup>1</sup>*Hylophilus flavipes viridiflavus* Lawrence is certainly nothing but a well-marked race, differing from *H. f. flavipes* by brighter, warbler green rather than dark citrine, upper parts; grayish instead of buffy yellow sides of the head with more whitish supraloral streak; grayish white throat and bright yellow (near amber yellow) under parts without any buffy posteriorly.

While admitting that birds from Chiriquí and Costa Rica (*pallescens*) average slightly darker (olive citrine rather than citrine) above and a trifle more buffy on the chest, I do not consider this insignificant variation worthy of recognition in nomenclature.

**Additional material examined.**—Costa Rica: Pózo Azul, 8.—Panama: Chiriquí, 2; Panama, 1.

*Range*.—Pacific lowlands of southwestern Costa Rica (from Pigres southward) and western Panama, east to Darien (Rio Chepo).  
5: Costa Rica (Buenos Aires, 3); Panama (Colon, 2).

**\*Hylophilus flavipes flavipes Lafresnaye. PALE-LEGGED  
HYLOPHILUS.**

*Hylophilus flavipes* Lafresnaye, Rev. Zool., 8, p. 342, 1845—Bogotá, Colombia (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 345, 1930); Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—Bogotá; Baird, Rev. Amer. Bds., 1, p. 375, 1866—Bogotá; Sclater, Ibis, 1881, p. 309—part, Colombia, Bogotá (monog.); Bangs, Proc. Biol. Soc. Wash., 12, p. 142, 1898—Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 172, 1900—Bonda, Colombia.

*Hylophilus flavipes* A. Southern race (*H. flavipes*) Gadow, Cat. Bds. Brit. Mus., 8, p. 312, 1883—part, Colombia.

*Pachysylvia flavipes* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 216, 1904—coast district of Colombia, east of Gulf of Uraba (diag.).

*Pachysylvia flavipes flavipes* Chapman, Bull. Amer. Mus. N. H., 36, p. 540, 1917—La Playa (Barranquilla), Calamar and Chicoral, Magdalena Valley, and Villavicencio, eastern base of eastern Andes, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 430, 1922—Bonda, Mamatoco, Dibulla, La Tigra, Fundación, Rio Hacha, Santa Marta, and Valencia, Colombia (habits); Todd, Proc. Biol. Soc. Wash., 42, p. 198, 1929—Colombia (monog.); Darlington, Bull. Mus. Comp. Zool., 71, p. 410, 1931—Rio Frio, Magdalena.

*Range*.—Tropical zone of Colombia (Caribbean coast from Barranquilla to Rio Hacha, La Goajira; Magdalena Valley; Villavicencio, at the eastern base of the eastern Andes).<sup>1</sup>

2: Colombia (Cartagena, Dept. Bolivar, 1; Fundación, Santa Marta, 1).

**\*Hylophilus flavipes acuticauda Lawrence.<sup>2</sup> BUFF-BELLIED  
HYLOPHILUS.**

<sup>1</sup> Specimens from Santa Marta, though less yellowish on the abdomen than Bogotá skins, appear, as a whole, to be nearer to *flavipes* than *acuticauda*.

*Additional material examined*.—Colombia: "Bogotá," 26; Mamatoco, 2; Bonda, 5.

<sup>2</sup> *Hylophilus flavipes acuticauda* Lawrence: Similar to *H. f. flavipes*, but coloration duller and less yellowish; upper parts duller citrine; under surface buffy, more brownish anteriorly, at best with a little yellowish on flanks and crissum.

Birds from Margarita Island (*H. griseipes*) are identical with those from the opposite Venezuelan coast (vicinity of Cumaná), whereas specimens from the banks of the Orinoco and from Caracas westwards have, on average, more yellowish or greenish suffusion on the flanks. However, this variation is too erratic and unstable to justify the recognition of an eastern form, for which Richmond's term would be available. In the Maracaibo basin intergradation to *H. f. flavipes* takes place, and certain individuals can very nearly be matched by Bogotá skins. It is



*Hylophilus acuticauda(us)* Lawrence, Proc. Acad. Nat. Sci. Phila., 1865, p. 37—Venezuela<sup>1</sup> (descr. of immature; type in coll. of G. N. Lawrence, now in the American Museum of Natural History, New York); Baird, Rev. Amer. Bds., 1, p. 378, 1866—Venezuela (descr. of type); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 166, 170—Caracas (crit.); idem, l.c., 1869, p. 252—plain of Valencia, Venezuela; Sclater, Ibis, 1881, p. 304—Venezuela (crit.).

*Hylophilus flavipes acuticauda* Berlepsch and Hartert, Nov. Zool., 9, p. 12, 1902—Ciudad Bolívar, Altagracia, and Caicara, Rio Orinoco, Venezuela (crit.).

*Pachysylvia acuticauda* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 216, 1904—Venezuela (diag.).

*Pachysylvia flavipes acuticauda* Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 156, 1916—Ciudad Bolívar and Caicara, Rio Orinoco; Todd, Proc. Biol. Soc. Wash., 42, p. 197, 1929—Venezuela (monog.).

*Hylophilus griseipes* Richmond, Proc. U. S. Nat. Mus., 18, p. 678, 1896—Margarita Island, Venezuela (type in U. S. National Museum); Clark, Auk, 19, p. 266, 1902—Margarita Island.

*Pachysylvia griseipes* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 216, 1904—Margarita Island (diag.); Lowe, Ibis, 1907, p. 561—Margarita Island; idem, Ibis, 1909, p. 323—Cariaco, Paria Peninsula, Venezuela; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 249, 254, 1909—Margarita Island.

*Hylophilus flavipes* (not of Lafresnaye) Sclater, Ibis, 1881, p. 309—part, spec. ex Valencia, Venezuela (spec. examined); Phelps, Auk, 14, p. 364, 1897—Cumanacora and San Antonio, Sucre, Venezuela.

**Range.**—Venezuela, from Margarita Island and the Paria Peninsula west to the Maracaibo basin, south to the Orinoco Valley.

14: Venezuela (Margarita Island, 6; Caracas, 2; Macuto, Caracas, 2; Maracay, Aragua, 1; Rio Aurare, Zulia, 1; Encontrados, Cata-tumbo River, Zulia, 2).

### **\**Hylophilus flavipes insularis* Sclater.<sup>2</sup> TOBAGO HYLOPHILUS.**

needless to repeat that the present form, long confused with *H. aurantiifrons saturatus*, is totally different specifically, as first pointed out by J. A. Allen (Bull. Amer. Mus. N. H., 13, p. 172, 1900).

**Additional material examined.**—Sucre: plain of Cumaná, 9; San Felix, inland of Cumaná, 1; Cariaco, Paria Peninsula, 2.—Orinoco Valley: Ciudad Bolívar, 6; Altagracia, 8; Caicara, 4.—Caracas, 1.—Carabobo: Puerto Cabello, 1; plain of Valencia, 1.

<sup>1</sup> Puerto La Cruz, Carabobo, suggested as type locality by Todd (Proc. Biol. Soc. Wash., 42, p. 198, 1929).

<sup>2</sup> *Hylophilus flavipes insularis* Sclater: Similar in coloration to *H. f. acuticauda*, but larger, with longer, heavier bill. Wing, 59–63, (female) 57–59; tail, 48–50, (female) 46–48; bill, 12½–13½.

Examination of a large series shows the Tobago form to be exceedingly variable in coloration. When compared to *H. f. acuticauda*, the under parts are generally more uniform olive buff, though selected individuals run very close. The pileum

*Hylophilus insularis* Sclater, Proc. Zool. Soc. Lond., 1861, p. 128—Tobago (type in coll. of P. L. Sclater, now in British Museum, examined); idem, Cat. Coll. Amer. Bds., p. 45, 1862—Tobago; Baird, Rev. Amer. Bds., 1, p. 379, 1866—Tobago (crit.); Sclater, Ibis, 1881, p. 305—part, Tobago (crit.); Cory, Auk, 10, p. 220, 1893—Tobago; Hellmayr, Nov. Zool., 13, p. 3 (note), 1906—Tobago.

*Pachysylvia insularis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 216, 1904—Tobago (diag.); Todd, Proc. Biol. Soc. Wash., 42, p. 196, 1929—Tobago (monog.).

*Hylophilus aurantiifrons* (not of Lawrence) Gadow, Cat. Bds. Brit. Mus., 8, p. 310, 1883—part, type of *H. insularis*, erroneously ascribed to Trinidad.

*Hylophilus pallidifrons* Dalmas, Mém. Soc. Zool. France, 13, p. 135, 1900—Tobago (type in coll. of R. de Dalmas, now in Tring Museum, examined).

*Range*.—Tobago Island.

13: Tobago Island.

**\**Hylophilus ochraceiceps ochraceiceps* Sclater. TAWNY-CROWNED HYLOPHILUS.**

*Hylophilus ochraceiceps* Sclater, Proc. Zool. Soc. Lond., 27, p. 375, 1859—Playa Vicente, Oaxaca, Mexico (type in coll. of P. L. Sclater, now in British Museum); Sclater and Salvin, Ibis, 1860, p. 397—Choctum, Guatemala; Sclater, Cat. Coll. Amer. Bds., p. 44, pl. 5, 1862—Oaxaca and Choctum (Vera Paz); Baird, Rev. Amer. Bds., 1, p. 376, 1866—Mexico to Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Angostura, Costa Rica; Frantz, Journ. Orn., 17, p. 295, 1869—Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 184—Bugaba, Chiriquí; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 41, 1878—Vera Paz, Guatemala; Sclater, Ibis, 1881, p. 306—Mexico (Oaxaca), Guatemala (Choctum, Chisec, Rio de la Pasión), Costa Rica, Veragua, and Bugaba, Chiriquí (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 207, 1882—Mexico (Oaxaca) to Panama (Bugaba); Gadow, Cat. Bds. Brit. Mus., 8, p. 310, 1883—Mexico to Panama; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Rio Sucio, Costa Rica; Ridgway, Proc. U. S. Nat. Mus., 10, p. 585, 1888—Segovia River, Honduras; Cherrie, l.c., 14, p. 529, 1891—Guatemala, Honduras (Segovia River), Costa Rica, and Chiriquí (crit.); idem, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 136, 1893—Lagarto, Boruca, and Terraba, Costa Rica (habits); Underwood, Ibis, 1896, p. 435—Miravalles, Costa Rica; Bangs, Proc. New Engl. Zool. Cl., 3, p. 59, 1902—Caribbean slope of Volcan de Chiriquí, Panama.

is frequently darker, more brownish, and this color also invades the upper part of the back, while the maxilla appears to be more blackish. However, similar specimens occur, also, on the Venezuelan mainland. Dalmas's description is disfigured by a misleading misprint, the length of the tail being given as 57 instead of 47. We have examined the types of *H. insularis* and *H. pallidifrons* and found them both to belong to the present form, the first-named being slightly immature. There is no representative of this group on Trinidad.

*Additional material examined*.—Tobago: Man o' War Bay, 12; Castare, 4; Mondland, 2; Lecito, 1; unspecified, 2.

*Hylophilus ochraceiceps ochraceiceps* Griscom, Bull. Amer. Mus. N. H., 64, p. 320, 1932—Guatemala.

*Pachysylvia ochraceiceps ochraceiceps* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 218, 1904—southern Mexico (states of Mexico (?), Oaxaca, Tabasco, and Campeche), Guatemala, and northern Honduras (monog.); (?) Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Palmul, Yucatan (sight record); Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz; Austin, l.c., 69, p. 388, 1929—Mountain Cow and Augustine, British Honduras; Todd, Proc. Biol. Soc. Wash., 42, p. 196, 1929—southern Mexico to western Panama (monog.).

*Pachysylvia ochraceiceps* Carriker, Ann. Carnegie Mus., 6, p. 778, 1910—Costa Rica (crit., habits).

*Pachysylvia ochraceiceps pallidipectus* Ridgway, Proc. Biol. Soc. Wash., 16, p. 108, 1903—Angostura, Costa Rica (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 219, 1904—southern Honduras to Chiriquí (monog.); Bangs, Auk, 24, p. 305, 1907—Boruca, Paso Real, Lagarto, Barranca, and Pózo del Rio Grande, Costa Rica (juv. descr.).

*Hylophilus ochraceiceps pallidipectus* Peters, Bull. Mus. Comp. Zool., 69, p. 461, 1929—Lancetilla, Honduras (crit.).

**Range.**—Tropical zone of southern Mexico, in states of Vera Cruz (Presidio), Oaxaca (Playa Vicente), Tabasco (Teapa), and Campeche (Apazote), south through Guatemala, British Honduras, Honduras, Nicaragua, and Costa Rica to western Panama (Bugaba; Volcan de Chiriquí).<sup>1</sup>

7: Guatemala (Vera Paz, 1); Nicaragua (San Rafael del Norte, 1); Costa Rica (Lagarto, 2; Boruca, 2; Térraba, 1).

### ***Hylophilus ochraceiceps nelsoni* (Todd).<sup>2</sup> NELSON'S TAWNY-CROWNED HYLOPHILUS.**

*Pachysylvia ochraceiceps brevipennis* (not *Helinai brevipennis* Giraud) Nelson, Smiths. Misc. Coll., 56, No. 22, p. 1, 1911—Lion Hill, Panama (type in U. S. National Museum).

*Pachysylvia ochraceiceps nelsoni* Todd; Proc. Biol. Soc. Wash., 42, p. 195, 1929—new name for *P. o. brevipennis* Nelson, preoccupied.

<sup>1</sup> In agreement with Carriker and Todd, I consider the alleged southern race, *H. o. pallidipectus*, to be inseparable. While admitting that *certain* Costa Rican examples are paler below, the majority of the southern birds cannot be distinguished, a good many from the Térraba region being even darker ochraceous on the chest than two (out of four) Guatemalan skins.

*Additional material examined.*—Guatemala: Vera Paz, 4.—Costa Rica: Miravalles, 4; Lagarto, 2; Boruca, 7; Térraba, 1.—Panama: Bugaba, 1.

<sup>2</sup> *Hylophilus ochraceiceps nelsoni* (Todd): "Similar to *H. o. ochraceiceps*, but upper parts and wings externally with less brownish wash, more greenish, under parts also slightly more greenish, the breast with less buffy shading." (Todd, l.c.).

This form, which we have not seen, according to Todd is intermediate between *ochraceiceps* and *bulunensis*, differing from the latter by more brownish upper, and less yellowish under parts. Its supposedly smaller size is open to question, as the original specimens may have been wrongly sexed.

*Hylophilus ochraceiceps nelsoni* Griscom, Auk, 50, p. 305, 1933—Rio Chepo, Darien.

*Range*.—Eastern Panama (from Veragua to the Rio Chepo, Darien).

***Hylophilus ochraceiceps bulunensis* Hartert.<sup>1</sup> BULÚN  
HYLOPHILUS.**

*Hylophilus bulunensis* Hartert, Nov. Zool., 9, p. 617, Dec., 1902—Bulún, Prov. Esmeraldas, Ecuador (type in Tring Museum examined).

*Pachysylvia ochraceiceps bulunensis* [sic] Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 223, 1922—Mount Sapo, Darien (crit.).

*Pachysylvia ochraceiceps bulunensis* Chapman, Bull. Amer. Mus. N. H., 55, p. 589, 1926—Tacaruna, eastern Panama, to northwestern Ecuador (crit.); Todd, Proc. Biol. Soc. Wash., 42, p. 195, 1929—eastern Panama (Mount Pirri, Cana), western Colombia (Potedo and Malagita, Chocó), and Ecuador (monog.).

*Hylophilus ochraceiceps bulunensis* Griscom, Bull. Mus. Comp. Zool., 72, p. 366, 1932—Obaldia and Ranchon, Panama.

*Range*.—Tropical zone of the Pacific coast region, from eastern Panama (Darien) through western Colombia (Potedo and Malagita, Chocó) south to northwestern Ecuador (Bulún, Prov. Esmeraldas).

***Hylophilus ochraceiceps ferrugineifrons* Sclater. RUFOUS-  
FRONTED HYLOPHILUS.**

*Hylophilus ferrugineifrons* Sclater, Proc. Zool. Soc. Lond., 1862, p. 110—"Bogotá," Colombia (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 359, 1862—Bogotá; Baird, Rev. Amer. Bds., 1, p. 377, 1866—Bogotá (descr.); Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Rio Negro, below Santa Barbara, Brazil (spec. in Vienna Museum examined); Sclater, Ibis, 1881, p. 307, pl. 11, fig. 2—part, "Oyapock, Cayenne," Bogotá, and Sarayacu, Ecuador; Gadow, Cat. Bds. Brit. Mus., 8, p. 311, 1883 (descr.); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Rio Santiago, Ecuador; Berlepsch and Hartert, Nov. Zool., 9, p. 12, 1902—Rio Orinoco (Nericagua, Munduapo) and Caura Valley (Suapure, Nicare, La Pricion), Venezuela; Penard and Penard, Vog. Guyana, 2, p. 537, 1910—"Guiana," errore.

<sup>1</sup>*Hylophilus ochraceiceps bulunensis* Hartert: Very similar to *H. o. nelsoni*, but still more greenish; back and upper wing coverts dark citrine, without any brownish wash; lower parts decidedly olive yellowish, the throat slightly more grayish. Wing (male), 57; tail, 39; bill, 13.

Two specimens from eastern Panama (Mount Sapo), while not quite so greenish as the type, are near enough to be referred to the same form. *H. o. bulunensis* connects the Central American races with *H. o. ferrugineifrons*. It approaches the latter in the greenish edges to the remiges and the coloration of the dorsal surface, but is strongly tinged with olive yellow underneath, where *H. o. ferrugineifrons* is mainly dull whitish, shaded with ecru olive across chest and along flanks.

*Material examined*.—Panama: Mount Sapo, 2.—Ecuador: Bulún, 1 (the type).

*Pachysylvia ferrugineifrons* Ihering, Rev. Mus. Paul., 6, p. 432, 1905—Rio Juruá, Brazil (spec. examined); idem, Cat. Faun. Braz., 1, p. 337, 1907—Rio Juruá and Ecuador (hab. part, excl. Pará); Sneath, Bol. Mus. Goeldi, 8, p. 478, 1914 (range, excl. "Guyana"); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 156, 1916—above the falls of the Orinoco and Caura Valley, Venezuela.

*Pachysylvia ochraceiceps ferrugineifrons* Chapman, Bull. Amer. Mus. N. H., 55, p. 589, 1926—Rio Suno and below San José, eastern Ecuador; Todd, Proc. Biol. Soc. Wash., 42, p. 194, 1929—Colombia and Ecuador (east of the Andes) east to the Guianan frontier of Venezuela and south to the Rio Purús, Brazil (monog.).

**Range.**—Southern Venezuela, from the Guianan frontier (Rio Yuruan) to the upper Orinoco, and eastern Colombia, and through eastern Ecuador and northwestern Brazil, west of the Rio Negro, south to the Rio Juruá and Rio Purús.<sup>1</sup>

**\**Hylophilus ochraceiceps viridior* (Todd).<sup>2</sup> SOUTHERN RUFOUS-FRONTED HYLOPHILUS.**

*Pachysylvia ochraceiceps viridior* Todd, Proc. Biol. Soc. Wash., 42, p. 194, 1929—Rio Surutú, Dept. Santa Cruz de la Sierra, Bolivia (type in Carnegie Museum, Pittsburgh).

*Hylophilus ferrugineifrons* (not of Sclater) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Amable Maria, Dept. Ayacucho, Peru; Sclater, Ibis, 1881, p. 307—part, Peru (ex Taczanowski); Taczanowski, Orn. Pér., 1, p. 445, 1884—Amable Maria.

<sup>1</sup> Specimens from Venezuela (Orinoco-Caura basin) agree substantially with Bogotá skins, but have rather more rufescent tails. A single bird from eastern Ecuador (Sarayacu) and one from the upper Rio Negro are similar except that the latter has more buffy yellowish under parts than any other individual we have seen. A female from the Rio Juruá, Brazil, by paler forehead and brighter greenish back closely approaches *H. o. viridior*.

**Material examined.**—Venezuela: Caura River (Suapure, La Pricion, Nicare, La Union), 9; Munduapo, Rio Orinoco, 3; Nericagua, Rio Orinoco, 1.—Colombia: "Bogotá," 5.—Ecuador: Sarayacu, 1.—Brazil: Rio Negro, below Santa Barbara, near the junction of the Rio Vaupé, 1; Rio Juruá, 1.

<sup>2</sup> *Hylophilus ochraceiceps viridior* (Todd): Similar to *H. o. ferrugineifrons*, but anterior crown paler, orange citrine rather than antique brown, and back and outer margins of remiges fresher, purer green (between citrine and dark citrine), without any brownish suffusion on the mantle. Wing (males), 58–61; tail, 42–44; bill, 12–13.

Except for its slightly more yellowish under parts—doubtless an individual variation—a single adult male from southeastern Peru (Yahuar Mayo) agrees perfectly with Bolivian topotypes courteously lent by Mr. Todd. Although approached by occasional individuals from within the range of *ferrugineifrons*, the present form is distinguishable by its paler russet forehead and fresh green, nearly uniform dorsal surface, whereas in the northern race the upper and middle portions of the back are always conspicuously suffused with brownish, the rump alone being of a duller green.

**Additional material examined.**—Bolivia, Dept. Santa Cruz: Rio Yapacani, 2; Rio Surutú, 2.—Peru: Yahuar Mayo, Sierra de Carabaya, 1.

*Pachysylvia ferrugineifrons* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 8, 1920—Yahuarmayo, Sierra of Carabaya, Peru.

**Range.**—Tropical zone of southern Peru, in depts. of Ayacucho (Amable Maria), Cuzco, and Puno (Sierra of Carabaya), and northern Bolivia (Rio Espiritu Santo; Rio Surutú; Rio Yapacani).

2: Bolivia (Rio Espiritu Santo, 2).

**\*Hylophilus ochraceiceps luteifrons Sclater.<sup>1</sup> BUFF-FRONTED HYLOPHILUS.**

*Hylophilus luteifrons* Sclater, Ibis, (4), 5, p. 308, 1881—Bartica Grove, British Guiana (type in Salvin-Godman Collection, now in British Museum); Gadow, Cat. Bds. Brit. Mus., 8, p. 311, 1883—"Roraima" [=Camacusa], British Guiana; Salvin, Ibis, 1885, p. 204—Bartica Grove, Merumé Mountains, and Camacusa, British Guiana; Penard and Penard, Vog. Guyana, 2, p. 537, 1910—Guiana (descr.).

*Pachysylvia luteifrons* Berlepsch, Nov. Zool., 15, p. 109, 1908—Ipousin, River Approuague, French Guiana; Snethlage, Bol. Mus. Goeldi, 8, p. 477, 1914—Santo Antonio da Cachoeira, Rio Jary, Brazil; Beebe, Trop. Wild Life, 1, p. 136, 1917—Bartica Grove, British Guiana; Chubb, Bds. Brit. Guiana, 2, p. 398, 1921—British Guiana (Ituribisci, Supenaam, Makauria River, "Roraima," Merumé Mountains, Camacusa, Bartica Grove); Todd, Proc. Biol. Soc. Wash., 42, p. 192, 1929—Guiana, south to the Amazon (monog.).

*Hylophilus surinamensis* Penard and Penard, Vog. Guyana, 2, p. 538, 1910—Surinam (location of type not stated).

*Pachysylvia ferrugineifrons* (not *Hylophilus ferrugineifrons* Sclater) Beebe, Our Search for a Wilderness, p. 322, 1910—Aremu River, British Guiana.

**Range.**—French, Dutch, and British Guiana, and the adjacent parts of northern Brazil, south to the north bank of the lower Amazon (Santo Antonio da Cachoeira, Rio Jary).

1: Brazil (Conceição, Rio Branco, 1).

**\*Hylophilus ochraceiceps rubrifrons Sclater and Salvin.<sup>2</sup> RED-FRONTED HYLOPHILUS.**

<sup>1</sup> *Hylophilus ochraceiceps luteifrons* Sclater: Nearest to *H. o. ferrugineifrons*, from which it differs by lacking the rufous color on the anterior portion of the pileum, only the forehead and supraloral region being tinged with dull buffy yellow. Besides, the under parts are more yellowish, primrose yellow rather than grayish white, the chest washed with buffy instead of with ecru olive, and the flanks as well as the lower tail coverts much more strongly shaded with greenish yellow. The dorsal surface is not so greenish, and the external edges to the remiges are more brownish, orange citrine rather than dark citrine. Wing, 57–59, (female) 54–57; tail, 41–43, (female) 39–41; bill, 12–13.

**Material examined.**—French Guiana: Ipousin, Approuague, 3.—British Guiana: Camacusa, 3.—Brazil: Conceição, Rio Branco, 1.

<sup>2</sup> *Hylophilus ochraceiceps rubrifrons* Sclater and Salvin: Easily distinguished from *H. o. luteifrons* by a well-defined bright rufous (antique brown) frontal and supraloral band, strongly contrasted with the color of the crown and sides of

*Hylophilus rubrifrons* Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 569, pl. 30, fig. 1—"River Amazons"—Pará<sup>1</sup> (type in coll. of P. L. Sclater, now in British Museum, examined); Sclater, Ibis, 1881, p. 307—lower Amazon (monog.); Gadow, Cat. Bds. Brit. Mus., 8, p. 311, 1883—lower Amazon.

*Pachysylvia rubrifrons* Ihering and Ihering, Cat. Faun. Braz., 1, p. 337, 1907—lower Amazon; Hellmayr, Nov. Zool., 17, p. 267, 1910—part, Pará; idem, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, p. 87, 1912—Pará; Snethlage, Bol. Mus. Goeldi, 8, p. 477, 1914—Pará, Mocajutuba, Providencia, Ananindeuba, Santa Isabel, and Peixe-Boi, Pará district; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 172, 1928—Pará.

*Pachysylvia rubrifrons* Todd, Proc. Biol. Soc. Wash., 42, p. 193, 1929—Pará region (monog.).

*Hylophilus ferrugineifrons* (not of Sclater) Pelzeln, Orn. Bras., 2, p. 70, 1868—part, Pará (spec. examined).

**Range.**—Northeastern Brazil, in the Pará region, probably only east of the Rio Tocantins.

1: Brazil (Utinga, Pará, 1).

### ***Hylophilus ochraceiceps lutescens* (Snethlage).<sup>2</sup> WESTERN RED-FRONTED HYLOPHILUS.**

*Pachysylvia rubrifrons lutescens* Snethlage, Orn. Monatsber., 22, p. 43, 1914—Boim, Rio Tapajóz, Brazil (type in Museu Goeldi, Pará); idem, Bol. Mus. Goeldi, 8, pp. 477, 489, 1914—Rio Xingú (Victoria) and Rio Tapajóz (Boim, Villa Braga); Todd, Proc. Biol. Soc. Wash., 42, p. 193, 1929—Brazil, from the Xingú to the Rio Madeira (monog.).

the head, and by having the throat and chest deep honey yellow, sometimes approaching brownish ochraceous, and much darker than the ecru olive abdomen. The tail is more rufescent, Brussels brown rather than medal bronze; the back duller, more greenish; the sides of the head are honey yellow instead of dull citrine, etc. Wing (average), 55; tail, 40; bill, 12-13.

**Material examined.**—Brazil: Pará, 2; Ananindeuba, 1; Peixe-Boi, 1; "Amazon," 1 (the type).

<sup>1</sup> The assumption that the type might have come from the "Rio Negro" proves to be fallacious. When advancing this theory (Nov. Zool., 17, p. 267, 1910), I was misled by the date "1850" on the label, which I took for the year when the bird had been collected. I have since found out that it indicates the date when the specimen was received in London. Moreover, the type agrees with specimens from the Pará region, where alone *H. o. rubrifrons* has been met with, whereas on the Rio Negro it is replaced by another form, *H. o. ferrugineifrons*.

<sup>2</sup> *Hylophilus ochraceiceps lutescens* (Snethlage): Very similar to *H. o. rubrifrons* and agreeing in bright rufous (antique brown) frontal edge and supraloral streak; but upper parts clearer and purer green with tail paler brown; throat and foreneck without the honey yellow or ochraceous tinge, these parts being about the same primrose yellow color as the abdomen. Wing (males), 59-61; tail, 42-44; bill, 12-13. By the coloration of the under parts, this form approaches *H. o. luteifrons*, but is even brighter yellowish.

Two adults from the Rio Madeira, on comparison, prove to be identical with a topotype from the Tapajóz.

**Material examined.**—Brazil: Villa Braga, Rio Tapajóz, 1; Calama, Rio Madeira, 1; Maroins, Rio Machados, 2.

*Pachysylvia rubrifrons* (not *Hylophilus rubrifrons* Sclater and Salvin) Hellmayr, Nov. Zool., 17, p. 267, 1910—Calama, Rio Madeira, and Maroins, Rio Machados (crit.).

**Range.**—Northern Brazil, south of the Amazon, from the Rio Xingú west to the Rio Madeira.

**\**Hylophilus decurtatus decurtatus* (Bonaparte). GRAY-HEADED HYLOPHILUS.**

*Sylvicola decurtata* Bonaparte, Proc. Zool. Soc. Lond., 5, "1837," p. 118, pub. June, 1838—Guatemala (type in coll. of Col. Velasquez de Leon, now in Liverpool Museum).

*Helinai brevipennis* Giraud, Ann. Lyc. Nat. Hist. N. Y., 5, p. 40, pl. 3, fig. 1, 1852—"Mexico and Texas" (type in U. S. National Museum?).

*Hylophilus cinereiceps* Sclater and Salvin, Proc. Zool. Soc. Lond., 1860, p. 299—Vera Paz, Guatemala (type in Salvin-Godman Collection, now in British Museum); idem, Ibis, 1860, p. 397—Choctum, Guatemala; idem, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad (crit.); Sclater, Cat. Coll. Amer. Bds., p. 44, 1862—Choctum, Guatemala, and Cordoba, Vera Cruz.

*Hylophilus pusillus* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 323, 1862—Atlantic side of the Isthmus of Panama (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); idem, l.c., 8, p. 180, 1865—Greytown, Nicaragua; idem, l.c., 9, p. 97, 1868—Dota and Angostura, Costa Rica; Baird, Rev. Amer. Bds., 1, p. 381, 1866—Isthmus of Panama to Nicaragua (crit.).

*Hylophilus decurtatus* Baird, Rev. Amer. Bds., 1, p. 380, 1866—southern Mexico and Guatemala (crit.); Salvin, Proc. Zool. Soc. Lond., 1867, p. 137—Santa Fé, Veragua; idem, l.c., 1870, p. 184—Castillo, Chitrá, and Calovévora, Veragua; Sclater and Salvin, l.c., 1870, p. 836—Honduras; Salvin, Ibis, 1869, p. 313—Tucuriquí, Costa Rica; idem, Ibis, 1872, p. 314—Chontales, Nicaragua; Lawrence, Bull. U. S. Nat. Mus., 4, p. 18, 1876—Tehuantepec (Chimalapa), Oaxaca; Boucard, Proc. Zool. Soc. Lond., 1878, p. 53—San José, Costa Rica; idem, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 41, 1878—Vera Paz, Guatemala; Sclater, Ibis, 1881, p. 298—southern Mexico to Panama (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 206, 1882—Mexico to Panama; Nutting, Proc. U. S. Nat. Mus., 5, p. 391, 1882—La Palma de Nicoya, Costa Rica; Gadow, Cat. Bds. Brit. Mus., 8, p. 307, 1883—Central America (monog.); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Pózo Azúl de Pirris, Costa Rica; Ridgway, Proc. U. S. Nat. Mus., 10, p. 579, 1887—Trujillo, Honduras; Richmond, l.c., 16, p. 487, 1893—Greytown and Rio Escondido, Nicaragua; Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 136, 1893—Lagarto, Boruca, and Buenos Aires, Costa Rica; idem, l.c., "6, p. 13, 1895—Rio Naránjo, Costa Rica"; Underwood, Ibis, 1896, p. 434—Miravalles to Bebedéro, Costa Rica; Bangs, Proc. New Engl. Zool. Cl., 3, p. 59, 1902—Boquete, Chiriquí.



*Pachysylvia decurtata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 216, 1904—southern Mexico to Isthmus of Panama (monog.); Bangs, Auk, 24, p. 305, 1907—Boruca and El Pózo del Río Grande, Costa Rica (crit.); Carriker, Ann. Carnegie Mus., 6, p. 779, 1910—Costa Rica; Peters, Auk, 30, p. 377, 1913—Camp Mengel, Quintana Roo; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Gatun, Panama; Todd, Proc. Biol. Soc. Wash., 42, p. 204, 1929—part, excl. Salvador and western Nicaragua; Austin, Bull. Mus. Comp. Zool., 69, p. 388, 1929—Mountain Cow, British Honduras.

*Pachysylvia decurtata decurtata* Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz.

*Hylophilus decurtatus decurtatus* Griscom, Bull. Amer. Mus. N. H., 64, p. 319, 1932—Secanquim, Chimoan, Finca Chamá, and Puebla, Guatemala (crit.).

*Hylophilus decurtatus pusillus* Peters, Bull. Mus. Comp. Zool., 69, p. 461, 1929—Lancetilla, Honduras; idem, l.c., 71, p. 333, 1931—Almirante and Boquete Trail, Panama.

**Range.**—Southern Mexico, in states of Vera Cruz, Oaxaca, Tabasco, Quintana Roo, and Yucatan; eastern Guatemala; Honduras; eastern Nicaragua; Costa Rica; and western Panama, east to the Canal Zone.<sup>1</sup>

19: Guatemala (unspecified, 2); Costa Rica (Miravalles, 1; Las Cañas, 1; Lagarto, 1; El General, 2; Boruca, 4; Pózo Azúl, 1; Orosí, 2; Siquirres, 1; Peralta, 2; Limón, 1); Panama (Boquete, Chiriquí, 1).

**\*Hylophilus decurtatus pallidus (Dickey and van Rossem).<sup>2</sup>**  
WESTERN GRAY-HEADED HYLOPHILUS.

*Pachysylvia decurtata pallida* Dickey and van Rossem, Proc. Biol. Soc. Wash., 40, p. 4, 1927—Puerto del Triunfo, Dept. Usulután, El Salvador (type in coll. of Donald R. Dickey, Pasadena).

<sup>1</sup> I find it impracticable to recognize an alleged southern form (*H. d. pusillus*). Neither the smaller size nor the supposed color characters (paler gray and less sharply defined cap and more yellowish green back) appear to me sufficiently constant to justify its discrimination. A single adult from the Panama Railroad (topotypical *pusillus*) differs, it is true, from all the others by more yellowish dorsal surface and by having the hind part of the crown suffused with olivaceous, but whether this is a constant feature in birds from the Canal Zone or merely indicates intergradation to *H. d. darienensis* remains to be determined by an adequate series. Two specimens from Chiriquí (Boquete) show faint greenish edges on the crown; otherwise they resemble birds from the Térraba Valley and eastern Costa Rica.

**Additional material examined.**—Mexico: Cordoba, Vera Cruz, 1.—Guatemala (Teleman, Vera Paz): 6.—Costa Rica: 37.—Panama: Boquete, Chiriquí, 1; Panama Railroad, 1.

<sup>2</sup> *Hylophilus decurtatus pallidus* (Dickey and van Rossem): Similar to *H. d. decurtatus*, but dorsal plumage conspicuously more yellowish, citrine rather than warbler green; throat and chest less grayish; sides and flanks more yellowish.

*Pachysylvia decurtata* (not *Sylvicola decurtata* Bonaparte) Todd, Proc. Biol. Soc. Wash., 42, p. 204, 1929—part, El Salvador and western Nicaragua.

*Range*.—El Salvador and the adjacent parts of western Nicaragua.

1: Nicaragua (San Gerónimo, Chinandega, 1).

## ***Hylophilus decurtatus darienensis* (Griscom).<sup>1</sup> DARIEN**

### **HYLOPHILUS.**

*Pachysylvia minor darienensis* Griscom, Amer. Mus. Nov., 282, p. 7, 1927—Cape Garachiné, eastern Panama (type in the American Museum of Natural History, New York); Todd, Proc. Biol. Soc. Wash., 42, p. 204, 1929—Colombia (Magdalena Valley and Pacific coast) north to eastern Panama (monog.).

*Hylophilus minor darienensis* Griscom, Bull. Mus. Comp. Zool., 72, p. 367, 1932—Permé and Obaldia, eastern Panama.

*Pachysylvia minor* (not *Hylophilus minor* Berlepsch and Taczanowski) Chapman, Bull. Amer. Mus. N. H., 36, p. 541, 1917—Los Cisneros, Rio Dagua, Colombia; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 223, 1922—Mount Sapo, Darien.

*Range*.—Tropical zone of Colombia, from the Pacific coast (Los Cisneros, Rio Dagua; Andagoya, Malagita, and Cordoba, Chocó) east to the Magdalena Valley (El Tambor, Rio Lebrija), and north to eastern Panama (Darien).

## **\**Hylophilus decurtatus minor* Berlepsch and Taczanowski.<sup>2</sup> LESSER HYLOPHILUS.**

*Hylophilus minor* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 542—Chimbo, Ecuador (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 160, 1927); Hartert, Nov. Zool., 9, p. 617, 1902—Paramba and Pambilár, Ecuador.

*Pachysylvia minor* Chapman, Bull. Amer. Mus. N. H., 55, p. 590, 1926—Esmeraldas, Bucay, Chimbo, Naránjo, La Chonta, Santa Rosa, Portovelo, Punta Santa Ana, Las Piñas, and Guainche, Ecuador.

*Pachysylvia minor minor* Todd, Proc. Biol. Soc. Wash., 42, p. 203, 1929—western Ecuador (monog.).

<sup>1</sup>*Hylophilus decurtatus darienensis* (Griscom): According to Todd (l.c.), similar in size and coloration to *H. d. minor*, but under parts not so brightly colored, the greenish yellow of the sides and flanks paler and more restricted.

By the coloration of the under parts this form, which we have not seen, seems to approach *H. d. decurtatus*, thus supporting our view that *H. decurtatus* and *H. minor* are conspecific.

<sup>2</sup>*Hylophilus decurtatus minor* Berlepsch and Taczanowski: Nearest to *H. d. pallidus* in coloring of under parts, although the sides and flanks as well as the back are of a still brighter, more yellowish tone; but pileum, instead of being light gray, dark citrine, somewhat duller than the back.

*Additional material examined*.—Ecuador: Paramba, 2; San Javier, 1; Chimbo, 1; unspecified, 2.

*Hylophilus* — (?) Sclater, Proc. Zool. Soc. Lond., 28, p. 273, 1860—Babahoyo.

*Hylophilus aurantiifrons* (not of Lawrence) Sclater, Ibis, 1881, p. 303—part, spec. from Babahoyo, Ecuador.

**Range.**—Tropical zone of western Ecuador.

1: Ecuador (Puente de Chimbo, 1).

### Genus LAWRENCIA Ridgway<sup>1</sup>

*Lawrencia* Ridgway, Auk, 3, p. 382, 1886—type, by orig. desig., *Empidonax nanus* Lawrence.

#### **Lawrencia nana** (Lawrence). FLAT-BILLED VIREO.

*Empidonax nanus* Lawrence, Ibis, (3), 5, p. 386, 1875—Santo Domingo (type in U. S. National Museum); Cory, Bds. Haiti and San Domingo, p. 82, pl. [22], fig. 5 (head), 1884—Santo Domingo; idem, Auk, 3, p. 233, 1886—Santo Domingo.

*Lawrencia nana(us)* Sclater, Cat. Bds. Brit. Mus., 14, p. 233, 1888—Santo Domingo; Cory, Cat. W. Ind. Bds., p. 109, 1892—Santo Domingo; Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 893, 1907—Santo Domingo (crit.); Verrill and Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 361, 1909—Miranda; Peters, Bull. Mus. Comp. Zool., 61, p. 416, 1917—Sosuá; Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 511, 1928—Gonave Island and northern Haiti (habits); Danforth, Auk, 46, p. 370, 1929—Gonave Island; Lönnberg, Fauna och Flora, 1929, p. 106—Gonave; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 356, 1931—Haiti and Gonave (crit., anatomy, habits).

**Range.**—Island of Haiti, including Gonave Island, Greater Antilles.

### Family VIREOLANIIDAE.<sup>2</sup> Shrike-Vireos

#### Genus VIREOLANIUS Bonaparte

*Vireolanius* (Du Bus MS.) Bonaparte, Consp. Gen. Av., 1, p. 330, 1850—type, by monotypy, *Vireolanius melitophrys* (Du Bus MS.) Bonaparte.

#### **\*Vireolanius melitophrys melitophrys** Bonaparte. DU BUS'S SHRIKE-VIREO.

<sup>1</sup>*Lawrencia* Ridgway differs from the other genera of vireos, according to Wetmore, "in the broad, depressed, triangular bill, the width of which at the frontal antiae is more than twice the depth at this point." Another striking feature lies in the elongated, slender tarsus. In anatomical characters the bird offers likewise some peculiarities, the skull being distinctly broader, the lower margin of the lachrymals extending outward only to the inner margin of the zygoma, and the outer margin of the processus maxillaris of the premaxilla being decidedly convex (Wetmore, l.c.). Altogether, the Flat-billed Vireo seems to be rather an aberrant member of the family.

<sup>2</sup> Cf. Pycraft, Proc. Zool. Soc. Lond., 1907, pp. 352–379.

*Vireolanius melitophrys* (Du Bus MS.<sup>1</sup>) Bonaparte, *Consp. Gen. Av.*, 1, p. 330, 1850—Mexico (type in Brussels Museum); Sclater, *Proc. Zool. Soc. Lond.*, 25, p. 213, 1857—Orizaba, Vera Cruz; idem, *l.c.*, 27, p. 363, 1859—Jalapa, Vera Cruz; idem, *l.c.*, 1862, p. 19—Capulalpam, Vera Cruz; idem, *Cat. Coll. Amer. Bds.*, p. 45, 1862—Jalapa; Sclater and Salvin, *Ibis*, 1860, p. 31—Coban, Guatemala; idem, *Exot. Orn.*, p. 13, pl. 7, 1866—Mexico (Orizaba, Jalapa) and Guatemala (Volcan de Fuego); Baird, *Rev. Amer. Bds.*, 1, p. 396, 1866—Volcan de Fuego; Sumichrast, *Mem. Bost. Soc. N. H.*, 1, p. 548, 1869—temperate region of Vera Cruz; Salvin and Godman, *Biol. Centr.-Amer., Aves*, 1, p. 209, 1883—part, Mexico, in State of Vera Cruz (Orizaba, Jalapa, Capulalpam), and Guatemala (Volcan de Fuego); Gadow, *Cat. Bds. Brit. Mus.*, 8, p. 314, 1883—Mexico and Guatemala (Coban); Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 225, 1904—part, Mexico, Vera Cruz (Orizaba, Jalapa, Jico, Capulalpam), and Guatemala (descr. of male only); Dearborn, *Field Mus. Nat. Hist., Orn. Ser.*, 1, p. 125, 1907—Lake Atitlan, Guatemala; Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 321, 1932—San Lucas, Tecpam, and Panajachel, Guatemala.

*Range*.—Subtropical zone of southeastern Mexico, in State of Vera Cruz (Orizaba, Jalapa, Jico, Capulalpam), and Guatemala (Coban, Volcan de Fuego, Lake Atitlan, Tecpam, San Lucas, Panajachel).

1: Guatemala (Lake Atitlan, 1).

***Vireolanius melitophrys goldmani* Nelson.<sup>2</sup> GOLDMAN'S SHRIKE-VIREO.**

*Vireolanius melitophrys goldmani* Nelson, *Proc. Biol. Soc. Wash.*, 16, p. 115, 1903—Huitzilac, Morelos, Mexico (type in U. S. National Museum); Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 744, 1904—mountains bordering the valley of Mexico.

*Vireolanius melitophrys* (not of Bonaparte) Salvin and Godman, *Biol. Centr.-Amer., Aves*, 1, p. 209, 1883—part, valley of Mexico; Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 225, 1904—part, valley of Mexico (descr. of female only).

<sup>1</sup> Plate 26 of Du Bus's "Esquisses Ornithologiques," quoted by Bonaparte, evidently was never published (cf. Sclater and Salvin, *Exot. Orn.*, p. 13, 1866), although a few sample copies without text may exist.

<sup>2</sup> *Vireolanius melitophrys goldmani* Nelson: "Similar to *V. m. melitophrys*, but larger, with shorter bill; coloration paler and duller, the pileum and hindneck light brownish gray (nearly mouse gray) merging gradually into the olive green of the back, instead of clear slate gray, abruptly defined posteriorly; broad postocular stripe slate color instead of black; black submalar streak heavier; band across chest paler chestnut-rufous, not continued along sides, which are pale cinnamon-buffy anteriorly, passing into olive-gray on flanks. Wing (adult female), 83–84; tail, 72–73; bill, 17.5." (Nelson, *l.c.*).

**Range.**—Mountains bordering the southern side of the valley of Mexico, in states of Mexico and Morelos (Huitzilac).

**Genus SMARAGDOLANIUS** Griscom<sup>1</sup>

*Smaragdolanus* Griscom, Amer. Mus. Nov., 438, p. 3, Dec., 1930—type, by orig. desig., *Vireolanus pulchellus* Sclater and Salvin.

**\*Smaragdolanus pulchellus pulchellus** (Sclater and Salvin).  
**GUATEMALAN GREENLET.**

*Vireolanus pulchellus* Sclater and Salvin, Ibis, 1, p. 12, 1859—Guatemala (type in British Museum); Salvin, Ibis, 1861, p. 147—above Lanquin, Guatemala; Sclater, Cat. Coll. Amer. Bds., p. 45, 1862—Choctum, Vera Paz; Sclater and Salvin, Exot. Orn., p. 15, pl. 8, 1866—above Lanquin and Choctum, Guatemala; Baird, Rev. Amer. Bds., 1, p. 397, 1866—part, Mirador, Vera Cruz, and Choctum, Guatemala; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 41, 1878—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 210, 1883—part, Mexico (Mirador) and Guatemala (Choctum, mountains of Rasché, Savanna Grande, and Volcan de Agua); Gadow, Cat. Bds. Brit. Mus., 8, p. 315, 1883—Guatemala (Choctum and Vera Paz); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 125, 1907—Patulul, Guatemala.

*Vireolanus pulchellus pulchellus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 223, 1904—Mexico, in State of Vera Cruz, and Guatemala (monog.); Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 483, 1927—Presidio, Vera Cruz.

*Smaragdolanus pulchellus pulchellus* Griscom, Bull. Amer. Mus. N. H., 64, p. 320, 1932—Secanquim, Guatemala.

**Range.**—Tropical zone of southern Mexico, in State of Vera Cruz (Mirador, Buena Vista), and Guatemala.<sup>2</sup>

3: Guatemala (Patulul, Solola, 2; Vera Paz, 1).

**\*Smaragdolanus pulchellus verticalis** (Ridgway). **CARMIOI'S GREENLET.**

*Vireolanus pulchellus verticalis* Ridgway, Proc. U. S. Nat. Mus., 8, p. 24, 1885—Angostura, Costa Rica (type in U. S. National Museum); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Costa Rica; Cherrie, Proc. U. S. Nat. Mus., 14, p. 529, 1891—Costa Rica (crit.); Richmond, l.c., 16, p. 487, 1893—Rio Escondido, Nicaragua (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 224, 1904—Nicaragua and Costa Rica (monog.); Carriker, Ann. Carnegie Mus., 6, p. 776, 1910—eastern Costa Rica (Jiménez, La Vijagua, and El Hogar).

<sup>1</sup> Genus *Smaragdolanus* Griscom: Similar to *Vireolanus*, but tail proportionately much shorter (only two-thirds as long as wing), bill slenderer, and rectal bristles much less developed, the longest hardly exceeding the bristly points of the frontal feathers.

<sup>2</sup> Additional material examined.—Guatemala: Coban, Vera Paz, 4.

*Vireolanus pulchellus* (not of Sclater and Salvin) Baird, Rev. Amer. Bda., 1, p. 397, 1866—part, Angostura; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Angostura, Costa Rica; Frantz, Journ. Orn., 17, p. 295, 1869—Costa Rica; Salvin, Ibis, 1872, p. 314—Chontales, Nicaragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 210, 1883—part, Nicaragua (Chontales) and Costa Rica (Angostura, Orósi).

*Range*.—Tropical zone of the Caribbean side of Nicaragua (Chontales, Rio Escondido, Bluefields) and Costa Rica (Angostura, Orósi, Jiménez, La Vijagua, El Hogar, etc.).

3: Costa Rica (Tuís, 1; Volcan de Turrialba, 1; Jiménez, 1).

***Smaragdolanus pulchellus viridiceps* (Ridgway). PANAMA GREENLET.**

*Vireolanus pulchellus viridiceps* Ridgway, Proc. Biol. Soc. Wash., 16, p. 108, 1903—Panama (type in the American Museum of Natural History, New York); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 224, 1904—Veragua to Panama (monog.); Bangs, Proc. Biol. Soc. Wash., 19, p. 109, 1906—Pózo Azúl [de Pirris], Costa Rica (crit.); Carriker, Ann. Carnegie Mus., 6, p. 776, 1910—El General de Térraba, Costa Rica.

*Vireolanus pulchellus* (not of Sclater and Salvin) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 468, 1862—Panama Railroad; Sclater and Salvin, Exot. Orn., p. 15, 1866—part, Panama; Salvin, Proc. Zool. Soc. Lond., 1870, p. 184—Calovévora, Veragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 210, 1883—part, Panama (Calovévora and Calobre, Veragua; Panama Railroad).

*Range*.—Western Panama, east to the Canal Zone, and southwestern Costa Rica (Pózo Azúl de Pirris and El General de Térraba).

***Smaragdolanus pulchellus mutabilis* (Nelson).<sup>1</sup> CANA GREENLET.**

*Vireolanus eximius mutabilis* Nelson, Smiths. Misc. Coll., 60, No. 3, p. 20, 1912—Cana, eastern Panama (type in U. S. National Museum).

*Range*.—Eastern Panama (Cana, Darien).

<sup>1</sup> *Smaragdolanus pulchellus mutabilis* (Nelson): Similar to *S. p. eximius*, but supraloral part of yellow superciliary stripe broader; a tinge of yellowish green suffuses and nearly replaces blue on forehead back to about middle of orbits; auriculars bordered posteriorly with blue, of the same tone as the crown; chin and throat bright canary yellow changing rather abruptly into, and contrasting with, yellowish green of lower neck and breast (in *eximius* chin is more greenish yellow and shades gradually over throat to green of breast); rest of under parts paler and more yellowish; under tail coverts canary yellow like throat. Wing (female), 70; tail, 44; bill, 19. (Nelson, l.c.)

This form, based on a single specimen from Cana, appears to be distinguished from *S. p. eximius* by yellowish green instead of blue forehead and much more yellowish under parts, particularly on throat, abdomen, and tail coverts. It is obviously a connecting link to *S. p. viridiceps*.

**\*Smaragdolanus pulchellus eximius (Baird).<sup>1</sup> BAIRD'S GREENLET.**

*Vireolanus eximius* Baird, Rev. Amer. Bds., 1, p. 398, 1866—Bogotá, Colombia (type in the Academy of Natural Sciences, Philadelphia); Sclater and Salvin, Exot. Orn., p. 16, 1866—New Granada; Gadow, Cat. Bds. Brit. Mus., 8, p. 316, 1883—Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 223, 1904—Colombia (crit.).

*Vireolanus icterophrys* (not of Bonaparte) Sclater, Proc. Zool. Soc. Lond., 23, p. 151, pl. 103, 1855—Bogotá (crit.).

*Range.*—Tropical zone of Colombia (only known from native "Bogotá" collections).

1: Colombia ("Bogotá," 1).

**Smaragdolanus leucotis leucotis (Swainson). WHITE-EARED GREENLET.**

*Malaconotus leucotis* Swainson, Anim. Menag., p. 341, Dec., 1837—"Africa(?)," errore (type in coll. of W. Swainson, now in University Museum, Cambridge, England, examined); Salvin, Ibis, 1878, p. 443 (crit. note on type).

*Vireolanus icterophrys* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 380, 1854; idem, Not. Orn. Coll. Delattre, p. 60, 1854—Rio Negro (type in coll. of E. and J. Verreaux); Baird, Rev. Amer. Bds., 1, p. 399, 1866—part (descr. spec. ex Cayenne in coll. of Acad. Nat. Sci. Philadelphia<sup>2</sup>); Sclater and Salvin, Exot. Orn., p. 16, 1866—Rio Negro (ex Bonaparte) and Cayenne (ex Baird).

*Vireolanus chlorogaster* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 380, 1854; idem, Not. Orn. Coll. Delattre, p. 60, 1854—"South America" (the type examined in the British Museum is from Cayenne); Sclater, Cat. Coll. Amer. Bds., p. 45, 1862—"eastern Peru"—Cayenne (spec. in British Museum examined); Baird, Rev. Amer. Bds., 1, p. 399, 1866—"eastern Peru"—Cayenne (descr. spec. No. 272a in coll. of P. L. Sclater); Sclater and Salvin, Exot. Orn., p. 16, 1866—"eastern Peru"—Cayenne (spec. No. 272a in coll. of P. L. Sclater); Salvin, Ibis, 1878, p. 444—Cayenne (crit. note on type); Beebe, Trop. Wild Life, 1, p. 136, 1917—Bartica Grove, British Guiana.

*Vireolanus leucotis* Salvin, Ibis, 1878, pp. 444, 445, pl. 11—from the Rio Negro to Ecuador (Sarayacu) (crit.); Sclater, Proc. Zool. Soc. Lond., 1881, p. 212—Mazaruni River, British Guiana (crit.; spec. examined); Salvin and Godman, Ibis, 1882, p. 77—British Guiana (spec. examined); Gadow, Cat. Bds. Brit. Mus., 8, p. 315, 1883—part, Rio Negro to Ecuador

<sup>1</sup> *Smaragdolanus pulchellus eximius* (Baird) differs from the northern races chiefly by the possession of well-marked yellow superciliaries, whereby it approaches the South American *S. leucotis*. The intermediate character of its coloration suggests conspecific relationship of the two groups, but without knowledge of its distribution it seems unwise to go beyond calling attention to their obvious close affinity.

*Material examined.*—Colombia: "Bogotá," 7.

<sup>2</sup> The second specimen, said to be from the "head of Huallaga, Peru," coll. of W. S. Church, is indeterminable owing to its poor condition. It may belong to *S. l. bolivianus*.

and Cayenne; Salvin, Ibis, 1885, p. 205—Bartica Grove and Merumé Mountains, British Guiana (spec. examined); Ménégau, Bull. Mus. Hist. Nat. Paris, 13, p. 494, 1907—French Guiana (spec. examined); Ihering and Ihering, Cat. Faun. Braz., 1, p. 337, 1907 (range); Penard, Vog. Guyana, 2, p. 539, 1910—hinterland of Surinam; Snethlage, Bol. Mus. Goeldi, 8, p. 478, 1914—Santo Antonio da Cachoeira, Rio Jary, Brazil.

*Vireolanius leucotis chlorogaster* Berlepsch and Hartert, Nov. Zool., 9, p. 13, 1902—Suapure, Caura River, Venezuela (spec. examined); Berlepach, l.c., 15, p. 109, 1908—Cayenne; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 157, 1916—Suapure, Caura River.

*Vireolanius chlorigaster* Chubb, Bds. Brit. Guiana, 2, p. 399, 1921—Ituribisci, Kamakabra Creek, Merumé Mountains, and Bartica Grove, British Guiana.

*Vireolanius leucotis leucotis* Chapman, Bull. Amer. Mus. N. H., 55, p. 590, 1926—Macas region and below San José de Sumaco, eastern Ecuador (crit.).

**Range.**—French, Dutch, and British Guiana, south to the north bank of the lower Amazon (Rio Jary) and west through southern Venezuela (Suapure, Caura Valley) and northwestern Brazil (Rio Negro) to eastern Ecuador.<sup>1</sup>

<sup>1</sup> Birds from British Guiana always have a conspicuous white mid-auricular stripe abruptly defined from the dark olive malar region and the slate gray ear coverts. The white tip to the bright yellow superciliaries is, as a rule, well-pronounced, though two specimens, from Arawai and Merumé Mountains respectively, show mere traces of it. In the majority, the forehead is very dark olive, but in the Merumé bird and in one from Bartica Grove it is just as pale as in east-Ecuadorian specimens. Swainson's type, kindly lent by the authorities of the Cambridge Museum, has the white stripe on the sides of the head fully as broad as any from Guiana, and while its deplorable condition renders it useless for further comparison, this character alone speaks for its Guianan rather than Peruvian origin. It may be mentioned in this connection that Brabourne and Chubb (Bds. S. Amer., 1, p. 351) quite erroneously credit me with the suggestion of "Peru" as type locality, which since has also been quoted by Chapman (Bull. Amer. Mus. N. H., 55, p. 590, 1926). An adult bird from French Guiana (coll. by Rey, Paris Museum) is in every respect similar, the white mid-auricular stripe being even more strongly developed. In eastern Ecuador this feature seems to be less marked. Only two have the white stripe as distinct as Guianan birds, while in three others it is rather obsolete, more of a whitish gray, and in another barely suggested by a few light streaks. The frontal edge is never dark olive, but green like the back, and the yellow superciliaries are with or without a white tip.

Birds with pale yellow, green-striped under parts are probably females or immature males, though the significance of the variation cannot be determined with the limited (mostly unsexed) material at my command. The type of *V. chlorogaster* unquestionably is a young bird. Like another Cayenne skin and one from "Peru," erroneously listed by Gadow as type of *V. sclerophrys*, to whose description it does not correspond at all, it has no white mid-auricular stripe, and the under parts are heavily streaked with greenish. An unsexed bird from the Mazaruni River and a "male" from Suapure, Caura, Venezuela, are similar underneath, the former having a broad white, the latter a narrower grayish white stripe on the sides of the head.

**Material examined.**—French Guiana: Cayenne, 2; unspecified, 1.—British Guiana: Bartica Grove, 1; Mazaruni River, 1; Ituribisci, 2; Arawai River, 1; Kamakabra Creek, 1; Tiger Creek, Essequibo River, 1; Merumé Mountains, 1.—Venezuela: Suapure, Caura Valley, 1.—Ecuador: San José, 1; Sarayacu, 5.



***Smaragdolanus leucotis simplex* (Berlepsch).<sup>1</sup> GRAY-EARED GREENLET.**

*Vireolanus leucotis simplex* Berlepsch, Orn. Monatsber., 20, p. 18, 1912—Santa Elena, Rio Jamauchim, branch of the Rio Tapajóz, Brazil (type in Museu Goeldi, Pará, examined); Snethlage, Bol. Mus. Goeldi, 8, p. 479, 1914—Rio Tocantins (Arumatheua), Rio Jamauchim (Santa Elena), and Rio Tapajóz (Boim); Naumburg, Bull. Amer. Mus. N. H., 60, p. 335, 1930—Barão Melgaço, northern Matto Grosso.

**Range.**—Brazil, south of the Amazon, from the Tocantins to the Rio Madeira, south to northern Matto Grosso (Barão Melgaço).

**\**Smaragdolanus leucotis bolivianus* (Berlepsch).<sup>2</sup> BOLIVIAN GREENLET.**

*Vireolanus bolivianus* Berlepsch, Journ. Orn., 49, p. 82, Jan., 1901—Quebrada Onda, Yungas of Cochabamba, Bolivia (type in Berlepsch Collection, now in Frankfort Museum, examined); Berlepsch and Stolzmann, Ornith., 13, p. 107, 1906—Huaynapata, Dept. Cuzco, Peru.

*Vireolanus chlorogaster* (not of Bonaparte) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Monterico, near Huanta, Prov. Ayacucho, Peru; idem, Orn. Pér., 1, p. 447, 1884—Monterico.

<sup>1</sup>*Smaragdolanus leucotis simplex* (Berlepsch): Similar to *S. l. leucotis*, but without trace of white on sides of head, the whole auricular region being clear gray, and the pileum lighter gray; even nearer to *S. l. bolivianus*, but upper part of the head clearer gray, and the sides of the body much more extensively green. Wing, 71–73; tail, 51–54; bill, 17–18.

Two adult males from Matto Grosso agree with topotypes.

**Material examined.**—Santa Elena, Rio Jamauchim, 4 (including the type); Barão Melgaço, Matto Grosso, 2.

<sup>2</sup>*Smaragdolanus leucotis bolivianus* (Berlepsch): Very similar to *S. l. leucotis*, but without any white in the auricular region.

In the absence of adult males from Bolivia it is at present impossible to properly indicate the characters and range of this form. The type and a second specimen from Quebrada Onda in the Berlepsch Collection are both unsexed, but agree essentially with a "female" from Cerro Hosane, Dept. Santa Cruz, in the Carnegie Museum, except in having more blackish olive suffusion on the forehead. The under parts, in the three specimens, are of varying shades of pale yellow, more or less flammulated with greenish on the foreneck and washed with the same along the flanks. A female from the Rio Purús (Hyutanahan) merely differs by lacking the dusky suffusion on the forehead; darker, more uniform slate gray cheeks and auriculars; slightly brighter green back; and brighter yellow under parts. Two adult males from the Rio Purús and two others from Peru (Rio Huacamayo, Carabaya; Huachipa, Huánuco) have deeper yellow under parts without greenish streaks on the foreneck, darker gray pileum, deeper yellow superciliaries, and still brighter green upper surface. They closely approach certain east-Ecuadorian males of *S. l. leucotis* without distinct white mid-auricular stripe. Whether these specimens simply represent the plumage of the adult male of *S. l. bolivianus* or should be classified as intermediates to *leucotis* remains to be determined by the examination of adult males from Bolivia.

**Material examined.**—Bolivia: Quebrada Onda, Yungas of Cochabamba, 2; Cerro Hosane, Dept. Santa Cruz, 1.—Brazil, Rio Purús: Hyutanahan, 2; Nova Olinda, 1.—Peru: Rio Huacamayo, Carabaya, 1; Huachipa, Huánuco, 1.

*Vireolanius leucotis* (subsp.?) Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 414, 1930—Huachipa, Dept. Huánuco, Peru (crit.).

**Range.**—Tropical zone of northern Bolivia (Quebrada Onda, Yungas of Cochabamba; Cerro Hosane, Dept. Santa Cruz) and southern Peru (Rio Huacamayo, Carabaya; Huaynapata, Marcapata Valley; Monterico, Dept. Ayacucho; Rio Perené, Dept. Junín; Huachipa, Dept. Huánuco), and the adjoining section of western Brazil (Rio Purús).

1: Peru (Huachipa, Dept. Huánuco, 1).

***Smaragdolanus leucotis mikettae* (Hartert).<sup>1</sup> MIKETTA'S GREENLET.**

*Vireolanius mikettae* Hartert, Bull. Brit. Orn. Cl., 11, p. 38, Dec., 1900—Paramba, Prov. Imbabura, Ecuador (type in Tring Museum examined); idem, Nov. Zool., 9, p. 616, 1902—Paramba.

*Vireolanius leucotis mikettae* Chapman, Bull. Amer. Mus. N. H., 55, p. 590, 1926—Paramba (ex Hartert).

**Range.**—Tropical zone of western Ecuador (Paramba, Prov. Imbabura; Rio Blanco, below Mindo, Prov. Pichincha).

**Family CYCLARHIDAE.<sup>2</sup> Pepper Shrikes**

**Genus CYCLARHIS Swainson<sup>3</sup>**

*Cyclarkhis* Swainson, Zool. Journ., 1, No. 3, p. 294, Oct., 1824—type, by monotypy, *Tanagra gujanensis* Gmelin.

*Cyclorhis* Swainson, Zool. Journ., 3, p. 162, 1827—emendation.

<sup>1</sup> *Smaragdolanus leucotis mikettae* (Hartert): Like *S. l. bolivianus* without any white on the sides of the head, but sides of breast and flanks much more extensively green; similar to *S. l. simplex* in the latter character, but pileum and sides of head deeper slate gray, and back brighter green. Wing (males), 69–70; tail, 49–50; bill, 17–18.

This form is known only from two adult males. The type was obtained at Paramba (alt. 3,500 ft.), in northwestern Ecuador, and the British Museum has a specimen taken by W. Goodfellow in June, 1914, at Rio Blanco, below Mindo. The two birds are practically alike. The forehead and a narrow line along the upper border of the uniform yellow superciliaries are blackish olive, and the cheeks and auriculars deep slate gray like the pileum.

More material is urgently required to establish the racial characters beyond doubt.

<sup>2</sup> Cf. Pycraft, Proc. Zool. Soc. Lond., 1907, pp. 352–379.

<sup>3</sup> It is quite possible that this name should be corrected to *Cyclorhis*. When creating the genus, Swainson explicitly refers to the "round, naked nostrils," so that the etymology of the name is not in doubt, although the author fails to explain its derivation. Three years later, he uses the correct spelling *Cyclorhis*, but in another writing (Orn. Draw., Part 5, pl. 58, late in 1837) reverts to the form *Cyclarkhis*. The case seems to be analogous to *Chamaepelia*, which, according to the ruling of the International Commission on Nomenclature (Opinion 61), is to be amended to *Chamaepelia*.

*Cyclaris* Swainson, *Classif. Bds.*, 2, p. 14, 1837—emendation.

*Laniagra* Lafresnaye and d'Orbigny, *Syn. Av.*, 1, in *Mag. Zool.*, 7, cl. 2, p. 9, 1837—type, by monotypy, *Tanagra gujanensis* Gmelin.

**\**Cyclarhis gujanensis flaviventris* Lafresnaye. MEXICAN PEPPER SHRIKE.**

*Cyclaris flaviventris* Lafresnaye, *Rev. Zool.*, 5, p. 133, 1842—"Santa Cruz,"<sup>1</sup> Mexico (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, *Bull. Mus. Comp. Zool.*, 70, p. 345, 1930).

*Cyclarhis flaviventris* Lafresnaye, *Mag. Zool.*, (2), 5, Ois., pp. 2, 3, of text to pl. 33, 1843—"Santa Cruz," Mexico; Tschudi, *Arch. Naturg.*, 11, (1), p. 363, 1845—Jalapa and "Santa Cruz," Mexico (diag.).

*Cyclorhis flaviventris* Baird, *Rev. Amer. Bds.*, 1, p. 386, 1866—part, Mexico (Orizaba, Mirador) and Coban, Guatemala (monog.); Sumichrast, *Mem. Bost. Soc. N. H.*, 1, p. 548, 1869—temperate region of Vera Cruz; Lawrence, *Bull. U. S. Nat. Mus.*, 4, p. 18, 1876—Guichicovi and Petapa, Oaxaca; Boucard, *Ann. Soc. Linn. Lyon*, (n.s.), 25, p. 41, 1878—Guatemala; Gadow, *Cat. Bds. Brit. Mus.*, 8, p. 320, 1883—southern Mexico and Guatemala; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 1, p. 211, 1883—Mexico (excl. Yucatan) and Guatemala (part, Tactic, Coban, Choctum); Ferrari-Perez, *Proc. U. S. Nat. Mus.*, 9, p. 138, 1886—Jalapa and Plan del Rio, Vera Cruz; Sclater, *Ibis*, 1887, p. 322—part, South Mexico (excl. Yucatan), Guatemala, and Honduras; Berlepsch, *Ibis*, 1888, pp. 84, 91—southern Mexico and Guatemala (crit.); Allen, *Bull. Amer. Mus. N. H.*, 2, pp. 131, 134, 1889—part, southern Mexico (excl. Yucatan) and Guatemala; Chapman, *l.c.*, 10, p. 26, 1898—Jalapa, Mexico.

*Cyclarhis flaviventris flaviventris* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 3, p. 228, 1904—southern Mexico, Guatemala, and (?) Honduras (monog., full bibliog.); Miller and Griscom, *Amer. Mus. Nov.*, 183, p. 6, 1925—Mexico (Vera Cruz, Oaxaca), Guatemala, and Honduras (crit.); Bangs and Peters, *Bull. Mus. Comp. Zool.*, 67, p. 483, 1927—Presidio and Motzorongo, Vera Cruz; idem, *l.c.*, 68, p. 400, 1928—Almoloya, Oaxaca; Griscom, *Bull. Amer. Mus. N. H.*, 64, p. 321, 1932—Secanquim, Sepacuite, Chamá, and La Primavera, eastern Guatemala.

**Range.**—Tropical zone of southern Mexico, in states of Vera Cruz, Puebla, Mexico, Oaxaca, and Chiapas, eastern Guatemala, and Honduras.<sup>2</sup>

1: Mexico (unspecified, 1).

<sup>1</sup>= Vera Cruz (?).

<sup>2</sup> Specimens from eastern Guatemala are identical with a Mexican series. According to Miller and Griscom (*l.c.*), a single example from Honduras is typical *flaviventris*. This finding is corroborated by a male taken by Wittkugel on the Volcan de Puca, examined some years ago, which appeared to us inseparable from Jalapa birds.

**Additional material examined.**—Mexico: Jalapa, Vera Cruz, 8; Orizaba, Vera Cruz, 1; Tumbalá, Chiapas, 1; unspecified, 3.—Guatemala: Coban, Vera Paz, 6.—Honduras: Volcan de Puca, 1.

**\*Cyclarhis gujanensis yucatanensis** Ridgway.<sup>1</sup> YUCATAN PEPPER SHRIKE.

*Cyclorhis flaviventris yucatanensis* Ridgway, Proc. U. S. Nat. Mus., 9, p. 519, Nov., 1886—Mérida, Yucatan (type in U. S. National Museum); Berlepsch, Ibis, 1888, pp. 91, 92—Yucatan (crit.); Allen, Bull. Amer. Mus. N. H., 2, pp. 132, 134, 1889—Yucatan (crit.); Chapman, l.c., 8, p. 278, 1896—Chichen Itza, Yucatan.

*Cyclarhis flaviventris yucatanensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 229, 1904—Yucatan and Campeche (monog.); Cole, Bull. Mus. Comp. Zool., 50, p. 137, 1906—Chichen Itza, Yucatan; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Palmul, Yucatan.

*Cyclorhis flaviventris* (not of Lafresnaye) Baird, Rev. Amer. Bds., 1, p. 386, 1866—part, Mérida, Yucatan; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 200, 1869—Mérida, Yucatan; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 211, 1883—part, Yucatan; Salvin, Ibis, 1888, p. 255—Meco Island, Yucatan; Stone, Proc. Acad. Nat. Sci. Phila., 1890, p. 210—Tekanto and Calcehtok, Yucatan.

**Range.**—Yucatan (Mérida, La Vega, Chichen Itza, Temax, Kangul, Tekanto, Izamal, etc.), including Meco Island, and Campeche.

4: Yucatan (San Felipe, 1; unspecified, 3).

**\*Cyclarhis gujanensis insularis** Ridgway.<sup>2</sup> COZUMEL PEPPER SHRIKE.

*Cyclorhis insularis* Ridgway, Proc. Biol. Soc. Wash., 3, p. 22, 1885—Cozumel Island (type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 8, p. 566, Oct., 1885—Cozumel (full descr.); Berlepsch, Ibis, 1888, pp. 84, 91—Cozumel (crit.); Salvin, Ibis, 1888, p. 255—Cozumel (crit.); Allen, Bull. Amer. Mus. N. H., 2, pp. 132, 134, 1889—Cozumel (crit.).

*Cyclarhis insularis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 230, 1904—Cozumel (monog.).

*Cyclarhis flaviventris insularis* Griscom, Amer. Mus. Nov., 236, p. 11, 1926—Cozumel (crit.).

**Range.**—Cozumel Island, Yucatan.

1: Cozumel Island.

<sup>1</sup> *Cyclarhis gujanensis yucatanensis* Ridgway: Similar to *C. g. flaviventris* in having no white on lower belly or under tail coverts, but upper parts slightly duller, more grayish green, and yellow of under surface decidedly paler.

**Additional material examined.**—Yucatan: Izamal, 3; Kangul, 1; unspecified, 2.

<sup>2</sup> *Cyclarhis gujanensis insularis* Ridgway: Immediately distinguished from *C. g. flaviventris* and *C. g. yucatanensis* by having the median portion of breast and abdomen extensively white; not unlike *C. f. subflavescens* in coloration of under parts, but with much larger bill, wider rufous frontal band, and much duller, more grayish green upper surface. The amount of yellow underneath is exceedingly variable in this form, as has been pointed out by Griscom, though there is always a considerable white area in the middle of the belly.

**Material examined.**—Cozumel Island, 10.

**\**Cyclarhis gujanensis nicaraguae* Miller and Griscom.<sup>1</sup> NICARAGUAN PEPPER SHRIKE.**

*Cyclarhis flaviventris nicaraguae* Miller and Griscom, Amer. Mus. Nov., 183, p. 6, July 28, 1925—Matagalpa, Nicaragua (type in the American Museum of Natural History, New York); Griscom, Bull. Amer. Mus. N. H., 64, p. 321, 1932—western Guatemala.

*Cyclarhis flaviventris mesoleucus* Dickey and van Rossem, Proc. Biol. Soc. Wash., 38, p. 135, Nov. 13, 1925—San Salvador, El Salvador (type in coll. of D. R. Dickey, Pasadena, California).

*Cyclorhis flaviventris* (not of Lafresnaye) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 211, 1883—part, Volcan de Agua and Volcan de Fuego, Guatemala; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 125, 1907—Mazatenango, Patulul, and Lake Atitlan, Guatemala.

*Range*.—Tropical zone of western Guatemala, El Salvador, and Nicaragua.

10: Guatemala (Mazatenango, 1; Patulul, 5; Lake Atitlan, 3); Nicaragua (San Gerónimo, Chinandega, 1).

**\**Cyclarhis gujanensis subflavescens* Cabanis.<sup>2</sup> COSTA RICAN PEPPER SHRIKE.**

*Cyclorhis subflavescens* Cabanis, Journ. Orn., 8, for Nov., 1860, p. 405, pub. May, 1861—highlands of Costa Rica (type in Berlin Museum); idem, l.c., 9, p. 93, 1861—Costa Rica (crit.); Sclater, Cat. Coll. Amer. Bds., p. 359, 1862—Costa Rica; Baird, Rev. Amer. Bds., 1, p. 388, 1866—Dota, Barránca, and San José, Costa Rica (crit.); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—San José and Dota, Costa Rica; Frantz, Journ. Orn., 17, p. 295, 1869—Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 184—Volcan de Chiriquí, Panama.

*Cyclorhis flaviventris* (not of Lafresnaye) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Gulf of Nicoya, Costa Rica (cf. Salvin, Ibis, 1869, p. 313).

<sup>1</sup> *Cyclarhis gujanensis nicaraguae* Miller and Griscom: Exactly intermediate between *C. g. flaviventris* and *C. g. subflavescens*; resembles the former in having the under parts for the greater part yellow, but the yellow is of a paler tone, particularly on the flanks and under tail coverts, and fades into white in the middle of the lower abdominal and anal region; differs from *C. g. subflavescens* by much brighter, canary yellow instead of greenish lemon yellow under parts with but a limited white area on the vent.

*Material examined*.—Nicaragua: Matagalpa, 2; Managua, 1; San Rafael del Norte, 2; Rio Coco, 1.—Guatemala (as specified above): 9.

<sup>2</sup> *Cyclarhis gujanensis subflavescens* Cabanis: Similar to *C. g. canticus* and *C. g. flaripectus* in having the posterior under parts, including the tail coverts, extensively white; but foreneck, chest, and sides much duller, greenish lemon yellow, and the superciliaries paler rufous. Specimens from Boquete, Chiriquí, agree with those from Costa Rica.

*Additional material examined*.—Costa Rica: San José, 10.—Panama: Boquete, Chiriquí, 5.

*Cyclorhis flavipectus* (not of Sclater) Boucard, Proc. Zool. Soc. Lond., 1878, p. 53—San José, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 212, 1883—part, Costa Rica and Chiriquí; Gadow, Cat. Bds. Brit. Mus., 8, p. 320, 1883—part, Costa Rica; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Dota, Costa Rica.

*Cyclorhis flavipectus subflavescens* Sclater, Ibis, 1887, p. 322—Costa Rica and Veragua; Berlepsch, Ibis, 1888, p. 85 (crit.); Allen, Bull. Amer. Mus. N. H., 2, pp. 131, 134, 1889—Costa Rica (crit.); idem, Auk, 9, p. 23, 1892—San José, Costa Rica (song); Bangs, Proc. New Engl. Zool. Cl., 3, p. 59, 1902—Boquete, Panama.

*Cyclarhis flavipectus subflavescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 230, 1904—Costa Rica and Chiriquí (monog.); Carriker, Ann. Carnegie Mus., 6, p. 775, 1910—highlands of Costa Rica; Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 274, 1910—Coliblanco, Costa Rica.

*Cyclarhis flaviventris subflavescens* Miller and Griscom, Amer. Mus. Nov., 183, p. 6, 1925 (crit.).

*Range*.—Subtropical and Upper Tropical zones of Costa Rica and western Panama (Chiriquí).

8: Costa Rica (Las Cañas, 2; San José, 3; Cartago, 1; Turrialba, 1; Coliblanco, 1).

### *Cyclarhis gujanensis coibae* Hartert.<sup>1</sup> COIBA ISLAND PEPPER SHRIKE.

*Cyclorhis coibae* Hartert, Bull. Brit. Orn. Cl., 12, p. 33, Dec., 1901—Coiba Island, off Panama (type in Tring Museum examined).

*Cyclarhis coibae* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 745, 1904—Coiba Island (ex Hartert).

*Range*.—Coiba Island, off Veragua, western Panama.

<sup>1</sup> *Cyclarhis gujanensis coibae* Hartert: Most nearly related to *C. g. subflavescens* and with the same amount of buffy white underneath, but distinguished by much darker upper parts, the back and wings being dull brownish olive, the pileum suffused with sepia; much darker gray sides of the head; and by having the foreneck and lower throat, in contrast to the lemon yellow breast, much duller and more greenish. The rufous superciliaries are the same as in *subflavescens*, both as to extent and coloration. Wing (adult male), 75; tail, 56; bill, 17.

This form was based on two males collected by the late J. B. Batty on April 20, 1901, on the island of Coiba, off the south coast of western Panama. The type is an immature bird with pointed, apically as well as internally yellow-fringed rectrices, and uniform blackish brown bill. The other specimen, an adult, has the bill pale horn brown with a plumbeous spot at the base of the lower mandible. In coloration it is similar, except that the gray basal portion of the crown feathers shows through. While the two birds look rather different from *C. g. subflavescens*, it is somewhat suggestive that an adult male from Hicaron Island, to the south of Coiba, does not appreciably deviate from the ordinary continental type. In view of this circumstance more material seems to be required for the proper understanding of the pepper shrike of these islands.

**\*Cyclarhis gujanensis canticus** Bangs.<sup>1</sup> SANTA MARTA PEPPER SHRIKE.

*Cyclarhis flavipectus canticus* Bangs, Proc. Biol. Soc. Wash., 12, p. 142, 1898—Santa Marta, Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 345, 1930); Allen, Bull. Amer. Mus. N. H., 13, p. 171, 1900—Bonda; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 227, 1904—Colombia (diag.); Chapman, Bull. Amer. Mus. N. H., 36, p. 541, 1917—Chicoral, Magdalena Valley, Colombia (crit.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 428, 1922—Bonda, Santa Marta, Mamatoco, Valencia, and Rio Hacha, Colombia (crit., habits); Darlington, Bull. Mus. Comp. Zool., 71, p. 409, 1931—Rio Frio, Magdalena.

*Cyclorhis flavipectus* Sclater, Proc. Zool. Soc. Lond., 26, p. 448, 1858—part, Santa Marta and "Bogotá"; idem, Cat. Coll. Amer. Bds., p. 45, 1862—part, spec. b, d, "Bogotá" and Santa Marta; Baird, Rev. Amer. Bds., 1, p. 389, 1866—part, Santa Marta; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 212, 1883—part, Colombia; Gadow, Cat. Bds. Brit. Mus., 8, p. 320, 1883—part, Santa Marta; Sclater, Ibis, 1887, p. 322—part, Colombia; Berlepsch, Ibis, 1888, pp. 85, 91—"Bogotá" (crit.); Allen, Bull. Amer. Mus. N. H., 2, pp. 130, 134, 1889—part, Santa Marta, Cartagena, and "Bogotá" (crit.).

*Cyclarhis flavipectus flavipectus* Hellmayr, Nov. Zool., 13, p. 11, 1906—part, "Bogotá."

**Range.**—Tropical zone of northern and eastern Colombia (Caribbean coast from Cartagena to La Hacha, La Goajira; Magdalena Valley; Rio Cesar Valley).

1: Colombia ("Bogotá," 1).

**\*Cyclarhis gujanensis flavipectus** Sclater.<sup>2</sup> YELLOW-BREASTED PEPPER SHRIKE.

<sup>1</sup> *Cyclarhis gujanensis canticus* Bangs: Most nearly related to *C. g. flavipectus*, but yellow of anterior under parts decidedly richer and brighter, less greenish, also more extensive, and the abdomen more strongly tinged with buffy; bill on average smaller.

Single individuals are not always distinguishable, but taken as a whole the characters of the Colombian birds appear to be sufficiently constant to justify the recognition of *C. g. canticus* as a separate race. In native "Bogotá" collections, both this and the next form are found, though the present one is much more common.

**Material examined.**—Colombia: Santa Marta, 6; Chicoral, Magdalena Valley, 1; "Bogotá," 18.

<sup>2</sup> *Cyclarhis gujanensis flavipectus* Sclater varies locally to a certain extent, but the divergency between birds from different parts of its range is not sufficiently constant to warrant further subdivision. When describing this form, Sclater did not distinguish between specimens from Colombia (Santa Marta, Bogotá) and others from Trinidad and Venezuela, and it was not until 1883 that Gadow definitely selected Trinidad as type locality, a procedure apparently overlooked by Allen, who renamed the same form as *C. f. trinitatis*.

Birds from Trinidad, which have, thus, to be considered as typical *flavipectus*, are characterized by large, stout bills, fresh (somewhat yellowish) green back, and bright yellow anterior under parts. The inner margin to the remiges is frequently

*Cyclorhis flavipectus* Sclater, Proc. Zool. Soc. Lond., 26, p. 448, 1858—part, Trinidad and Venezuela, between La Guayra and Caracas (type from Trinidad in coll. of P. L. Sclater, now in British Museum, as designated by Gadow, Cat. Bds. Brit. Mus., 8, p. 320, 1883); idem, Cat. Coll. Amer. Bds., p. 45, 1862—part, spec. a, c, Caracas and Trinidad; Taylor, Ibis, 1864, p. 81—Trinidad; Baird, Rev. Amer. Bds., 1, p. 389, 1866—part, Trinidad; Léotaud, Ois. Trinidad, p. 263, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 166, 627—Carúpano (Sucré) and San Esteban (Carabobo), Venezuela; Gadow, Cat. Bds. Brit. Mus., 8, p. 320, 1883—part, Trinidad and Caracas; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 212, 1883—part, Venezuela, Trinidad, and "Amazonia" (errore); Sclater, Ibis, 1887, p. 322—part, Venezuela and Trinidad; Berlepsch, Ibis, 1888, pp. 85, 91—part, Venezuela and Trinidad; Allen, Bull. Amer. Mus. N. H., 2, p. 134, 1889—part, Venezuela; Chapman, l.c., 6, p. 26, 1894—Trinidad; Phelps, Auk, 14, p. 364, 1897—Cumanacoa and San Antonio (Sucré), Venezuela; Berlepsch and Hartert, Nov. Zool., 9, p. 13, 1902—Altagracia, Caicara, Urbana, and Ciudad Bolívar, Rio Orinoco, and Suapure, Caura, Venezuela (crit., nest and eggs descr.).

*Cyclorhis flavipectus trinitatis* Allen, Bull. Amer. Mus. N. H., 2, pp. 131, 134, 1889—Trinidad (type probably in the American Museum of Natural History, New York).

*Cyclarhis flavipectus* Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 188, 1906—Aripo, Trinidad.

*Cyclarhis flavipectus flavipectus* Hellmayr, Nov. Zool., 13, p. 11, 1906—part, Trinidad (Caparo, Laventille, Chaguaramas, Pointe Gourde, Valencia,

brighter yellowish than in continental birds, but this feature holds only in eight out of twenty individuals. Specimens from Sucré (hinterland of Cumaná), the Orinoco Valley, and the eastern base of the Colombian Andes (topotypical *parvus*) merely differ by their smaller bills. In coloration they agree inter se, and do not appreciably diverge from the Trinidad series. The pepper shrikes from northwestern Venezuela (Caracas region; San Esteban; Tocuyo, Lara) are also small-billed, but with few exceptions they are duller, more grayish green above, and the jugular area is of a paler yellow. The larger bill is thus seen to be the only fairly constant feature of the Trinidad form, though various specimens from the mainland, such as two from the Caura and one from Ciudad Bolívar, are just as large-billed. If the island birds be separated on this score, the pepper shrikes of Sucré, the Orinoco basin, and eastern Colombia will have to be united under Chapman's term *parvus*, and those from northwestern Venezuela, with duller grayish green back and paler yellow under parts, will require a new name. Considering the fact, however, that very large numbers of birds from the various regions are not distinguishable with certainty, I do not advocate this splitting into three races, and prefer to keep them together under Sclater's subspecific designation *flavipectus*, as I have explained at length in Arch. Naturg., 90, A, Heft 2, pp. 162-164. Two specimens from the Caura Valley, Venezuela, by more greenish yellow foreneck and chest, exhibit a tendency in the direction of *C. g. gujanensis*.

*Additional material examined.*—Trinidad: Caparo, 18; Icacos, 1; Laventille, 3; Valencia, 1; Pointe Gourde, 1; Aripo, 1.—Venezuela, Sucré: Campos Alegre, 8; Celci Puede, 3; Quebrada Seca, 2; Los Palmales, 2; La Tigrera, 1; La Montaña del Guacharo, Caripé, 1; Altagracia, Rio Orinoco, 8; Ciudad Bolívar, 2; Caicara, Rio Orinoco, 2; Urbana, Rio Orinoco, 1; Caura Valley, 4; Rio Maméra, Caracas, 1; Loma Redonda, Caracas, 8; Las Quiguas and San Esteban, Carabobo, 11; San Carlos, Zamora, 1; near Bucarito, Lara, 2.—Colombia: Villavicencio, 1; "Bogotá," 2.



Seelet) and Venezuela (Cumaná; Bucarito, Lara; San Esteban: San Carlos); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 357, 1908—Carenage, Trinidad.

*Cyclarhis gujanensis flavipectus* Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 69, 1912—Las Quiguas, Carabobo, Venezuela; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 207, 1913—Cariquito and Pedernales, Paria Peninsula, and Jocopita and Boca Uracoa, Manimo River, Orinoco Delta, Venezuela; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 158, 1916—Orinoco region (nesting habits); Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 161, 1924—Loma Redonda, Venezuela (crit.).

*Cyclarhis flavipectus parvus* Chapman, Bull. Amer. Mus. N. H., 36, p. 741, 1917—Villavicencio, foot of eastern Andes, Colombia (type in the American Museum of Natural History, New York).

*Cyclorhis guianensis* (not *Tanagra gujanensis* Gmelin) Cabanis, Mus. Hein., 1, p. 64, 1851—part, Caracas.

**Range.**—Island of Trinidad and Venezuela, south to the Orinoco basin, and west to the eastern foot of the eastern Andes of Colombia (Villavicencio and Buenavista).

9: Trinidad (St. Ann's Valley, 1); Venezuela (Cumaná, 1; Caracas, 3; Maracay, Aragua, 3; Colón, Tachira, 1).

**\**Cyclarhis gujanensis gujanensis* (Gmelin). GUIANAN PEPPER SHRIKE.**

*Tanagra gujanensis* Gmelin, Syst. Nat., 1, (2), p. 893, 1789—based on "Verderoux" Buffon, Hist. Nat. Ois. (Impr. Roy.), 5, p. 27; "Guyane"—French Guiana.

*Tanagra guianensis* Latham, Ind. Orn., 1, p. 427, 1790—based on "Verderoux" Buffon.

*Lanius superciliaris* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 26, p. 153, 1818—based on "Le Sourcirou" Levaillant, Ois. d'Afr., 2, p. 111, pl. 76, fig. 2, 1799; probably Cayenne.

*Cyclarhis poliocephala* Tschudi, Arch. Naturg., 11, (1), p. 362, 1845—"Brasilia septentrionalis; Guyana, Surinam" (no type specified); idem, Unters. Faun. Peru., Aves., p. 169, 1846—forests of Peru.

*Cyclarhis guyanensis* Lafresnaye, Rev. Zool., 5, p. 133, 1842—part, Cayenne and Brazil; idem, Mag. Zool., (2), 5, Ois., text to pl. 33, p. 2, 1843—part, Cayenne and Brazil.

*Cyclorhis guianensis* Cabanis, Mus. Hein., 1, p. 64, 1851—part, Brazil; Burmeister, Syst. Uebers. Th. Bras., 3, p. 106, 1856—part, Pará and Amazonia; Sclater, Proc. Zool. Soc. Lond., 26, p. 448, 1858—Guiana and northern Brazil; idem, Cat. Coll. Amer. Bds., p. 45, 1862—Ucayali, Peru, and Cayenne; Baird, Rev. Amer. Bds., 1, p. 389, 1866—Cayenne (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper Ucayali, Peru; idem, l.c., 1867, p. 569—Pará; Pelzelin, Orn. Bras., 2, pp. 74, 138, 1868—Borba (Rio Madeira), Rio Negro, and Forte do Rio Branco, Brazil (diag.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873,

p. 257—upper Ucayali; Taczanowski, l.c., 1874, p. 509—Paltaypampa, Peru; idem, Orn. Pér., 1, p. 448, 1884—Paltaypampa and upper Ucayali, Peru; Gadow, Cat. Bds. Brit. Mus., 8, p. 319, 1883—Guiana and north-eastern Brazil (Pará); Salvin, Ibis, 1885, p. 205—Roraima, British Guiana; Sclater, Ibis, 1887, p. 323—Guiana, Cayenne, lower and upper Amazonia (crit.); Berlepsch, Ibis, 1888, pp. 86, 91 (crit., range); idem, Journ. Orn., 37, p. 294, 1889—Tarapoto, Peru; Allen, Bull. Amer. Mus. N. H., 2, pp. 133, 134, 1889—Cayenne, Pará, and Santarém (crit.); Riker and Chapman, Auk, 7, p. 266, 1890—Santarém; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 332—La Gloria, Dept. Junín, Peru; Ménégau, Bull. Mus. Hist. Nat., Paris, 10, p. 180, 1904—Oyapock River, French Guiana; Snethlage, Journ. Orn., 56, p. 9, 1908—Bom Lugar and Monte Alegre, Rio Purús; Penard, Vog. Guyana, 2, p. 538, 1910—Surinam (nest and eggs descr.).

*Cyclorhis gujanensis* Ihering, Cat. Faun. Braz., 1, p. 338, 1907 (range); Berlepsch, Nov. Zool., 15, pp. 109, 316, 1908—Cayenne and Oyapock, French Guiana.

*Cyclarhis gujanensis* Hellmayr, Nov. Zool., 12, p. 271, 1905—Igarapé-Assú, Pará; Snethlage, Bol. Mus. Goeldi, 8, p. 479, 1914—Pará, Providencia, Benevides, Maguary, Apehú, Santo Antonio do Prata, Bragança, Rio Guamá (Santa Maria de São Miguel), Rio Tocantins (Ilha Pirunum), Rio Xingú (Forte Ambé), Rio Jamauchim (Santa Helena), Rio Tapajóz (Boim), and Monte Alegre; Chubb, Bds. Brit. Guiana, 2, p. 401, 1921—Roraima and upper Takutu Mountains, British Guiana; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 59, 1926—Tury-assú, Maranhão.

*Cyclarhis gujanensis gujanensis* Hellmayr, Nov. Zool., 14, p. 346, 1907; l.c., 17, p. 269, 1910—Borba and Humaytá, Rio Madeira; idem, Abhandl. Math.-Phys. Kl. Bayr. Akad. Wiss., 26, No. 2, p. 87, 1912—Pará and Igarapé-Assú, Pará; Beebe, Zoologica (N.Y.), 2, p. 96, 1916—Utinga, Pará; Naumburg, Auk, 42, p. 346, 1925 (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 173, 1928—Pará; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 263, 1929—Tury-assú, Maranhão; Naumburg, Bull. Amer. Mus. N. H., 60, p. 386, 1930—Juruena River, Matto Grosso; Chapman, l.c., 63, p. 113, 1931—Arabupu, Philipp Camp, and Rondon Camp, Roraima.

*Cyclarhis gujanensis albiventris* (not of Sclater and Salvin, 1873) Carriker, Proc. Acad. Nat. Sci. Phila., 82, p. 375, 1930—Eneñas, Dept. Junín, Peru (type in the Academy of Natural Sciences, Philadelphia).

**Range.**—French, Dutch, and British Guiana; northern Brazil, from the wooded coast-belt of northwestern Maranhão (Tury-assú) throughout the Amazonian basin south to northern Matto Grosso (Juruena River) and west to eastern Peru<sup>1</sup> (Samiria, Rio Marañón;

<sup>1</sup> Not yet taken in eastern Ecuador (cf. Chapman, Bull. Amer. Mus. N. H., 55, p. 590, 1926).

Tarapoto, Rio Huallaga; upper Ucayali; La Gloria, Eneñas, and Rio Perené, Dept. Junín).<sup>1</sup>

2: Brazil (Manáos, 1; Tury-assú, Maranhão, 1).

**\*Cyclarhis gujanensis cearensis Baird.<sup>2</sup> EAST BRAZILIAN PEPPER SHRIKE.**

*Cyclorhis cearensis* Baird, Rev. Amer. Bds., 1, p. 391, May, 1866—Ceará (type in U. S. National Museum); Berlepsch, Zeits. Ges. Orn., 2, p. 116 (note 1), 1885—Ceará, Bahia, and "Nova Friburgo," errore (crit.); idem, Ibis, 1888, pp. 87, 91—Bahia and Goyaz (crit.); Ihering and Ihering, Cat. Faun. Braz., 1, p. 338, 1907—Barretos, São Paulo (range in part, excl. Rio de Janeiro, Nova Friburgo, and Pará); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 79, 1910—Pernambuco (Pão d'Alho, near Recife) and Bahia (Cabula; Fazenda Tabôa and Santa Rita, Rio Preto); Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará.

*Cyclarhis gujanensis cearensis* Hellmayr, Nov. Zool., 15, pp. 22, 23, 1908—Rio Thesouras and Rio Araguaya, Goyaz (crit., synonym., range, meas.); Ménégau, Rev. Franç. d'Orn., No. 98, p. 85, 1917—Poconé, Matto Grosso; Hellmayr, Nov. Zool., 28, p. 192, 1921—Chiquitos, eastern Bolivia; Naumburg, Auk, 42, p. 346, 1925 (crit.); idem, Bull. Amer.

<sup>1</sup> Birds from various localities in northern Brazil agree with series from French Guiana and Mount Roraima, but are perhaps not quite so greenish on the foreneck. A single adult from the Rio Juruena, Matto Grosso, is quite typical of *gujanensis*. On the other hand, a male from Tury-assú, Maranhão, tends to *C. g. cearensis* by larger bill and greater extent of the greenish area on jugulum and sides of chest, thus connecting the two forms. I do not see how Peruvian birds, described by Carriker under the preoccupied name *albiventris*, can be separated. An adult male from La Gloria, Chanchamayo, shows none of the characters assigned to the supposed race, the middle of the breast being, if anything, more grayish than in the Guianan average, while the chest is of the same tone as in numerous specimens from other localities. Two additional skins from northern Peru (Samiria and Tarapoto) do not differ either.

*Additional material examined.*—French Guiana: Cayenne, 5; Saint Jean du Maroni, 1.—Dutch Guiana: near Paramaribo, 1.—British Guiana: Roraima, 7; Rio Yuruani, 1.—Brazil: Utinga, Pará, 1; Igarapé-Assú, Pará, 1; Ourém, Rio Guamá, 2; Faro, Rio Jamundá, 1; Forte Ambé, Rio Xingú, 1; Forte do São Joaquim, Rio Branco, 2; Manáos, 1; Rio Negro, below Marabitanas, 1; Borba, Rio Madeira, 2; Humaytá, Rio Madeira, 1; Rio Juruena, Matto Grosso, 1.—Peru: Samiria, 1; Tarapoto, Rio Huallaga, 1; La Gloria, Chanchamayo, Dept. Junín, 1.

<sup>2</sup> *Cyclarhis gujanensis cearensis* Baird is merely a small form of *C. g. viridis* with less powerful bill, somewhat brighter green back, and clearer yellow foreneck. The buffy tinge of the abdomen is well-pronounced in fresh plumage, but gradually disappears as the season advances.

Birds from Bahia (*albiventris*) are identical with series from Ceará and interior Maranhão, while the inhabitants of Minas Geraes, Goyaz, and Matto Grosso generally have slightly smaller bills, although this insignificant divergency is completely bridged by individual variation. It is now an established fact that specimens without the plumbeous basal spot to the lower mandible, considered by certain authors as specifically different (*C. wiedii*), merely represent an immature stage of the present form. Birds from the coast of Maranhão (São Bento, Miritiba) are intermediate to *C. g. gujanensis*, a race which actually stretches into the extreme northwestern section of that state.

Mus. N. H., 60, p. 337, 1930—Urucúm and Tapirapoan, Matto Grosso (crit.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 264, 1929—Maranhão (São Bento, São Luiz, Barra do Corda, Codó [Cocos], Tranqueira, Fazenda Inhuma), Piauí (Arára), Ceará (Varzea Formosa, Quixada, Serra de Baturité, Juá), and Goyaz (Philadelphia) (crit.); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 306, 1930—San José, Santa Cruz, Bolivia.

*Thamnophilus guianensis* (not *Tanagra gujanensis* Gmelin) Wied, Beitr. Naturg. Bras., 3, (2), p. 1016, 1831—Campo Geral, southwestern Bahia.

*Laniagra guyanensis* d'Orbigny, Voy. Amér. Mérid., Ois., p. 160, 1836—Chiquitos, Bolivia; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 9, 1837—part, Bolivia.

*Cyclorhis guianensis* Burmeister, Syst. Uebers. Th. Bras., 3, p. 106, 1856—Brazil (part).

*Cyclorhis viridis* (not *Saltator viridis* Vieillot) Baird, Rev. Amer. Bds., 1, p. 392, 1866—part, Rio Paraná; Allen, Bull. Amer. Mus. N. H., 2, pp. 123, 126, 134, 1889—Chapada, Matto Grosso (range in part); idem, l.c., 3, p. 346, 1891—Chapada; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 3, 1900—Corumbá, Matto Grosso; Ihering, Cat. Faun. Braz., 1, p. 337, 1907—part, Matto Grosso; Grant, Ibis, 1911, p. 89—part, Pan de Azucar, Matto Grosso.

*Cyclorhis wiedii* Pelzeln, Orn. Bras., 2, pp. 74, 137, 138, 1868—Bahia, Rio Paraná (São Paulo), Goyaz, Cuyabá and Engenho do Cap Gama, Matto Grosso (type, from Cuyabá, in Vienna Museum examined); Berlepsch, Zeits. Ges. Orn., 2, p. 116 (note 1), 1885—Rio Paraná (crit.); idem, Ibis, 1888, pp. 88, 91—Engenho do Cap Gama, Matto Grosso, and Rio Paraná (crit.).

*Cyclorhis albiventris* Sclater and Salvin, Nomencl. Av. Neotrop., p. 156, 1873—Bahia, Brazil (type in coll. of P. L. Sclater, now in British Museum); Forbes, Ibis, 1881, p. 329—Pernambuco; Gadow, Cat. Bds. Brit. Mus., 8, p. 319, 1883—Bahia, Pernambuco, and "Pará" (errore); Sclater, Ibis, 1887, p. 323—Pernambuco to Bahia (crit.); Berlepsch, Ibis, 1888, p. 86 (crit.).

*Cyclorhis* sp. inc. Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—part, Chiquitos, Bolivia (ex d'Orbigny).

**Range.**—Eastern Bolivia (plains of Chiquitos) and tableland of Brazil, from Matto Grosso and northern São Paulo (Rio Paraná and Barretos) east to western Minas Geraes and Bahia, and north to Ceará, Piauí, and Maranhão.

39: Brazil, Maranhão (São Bento, 1; São Luiz, 1; Barra do Corda, 2; Codó, Cocos, 1; Tranqueira, 1; Fazenda Inhuma, Alto Parnahyba, 2); Piauí (Arára, 2); Ceará (Varzea Formosa, 2; Quixada, 3; Serra de Baturité, 4; Juá, near Iguatú, 5); Bahia (Santo Amaro, 3; Macaco Secco, near Andarahy, 1; Rio do Peixe, near Queimadas, 1); Goyaz

(Philadelphia, 4); Matto Grosso (Chapada, 2; Descalvados, 2; Urucúm de Corumbá, 2).<sup>1</sup>

**\**Cyclarhis gujanensis viridis* (Vieillot). STOUT-BILLED PEPPER SHRIKE.**

*Saltator viridis* Vieillot, Tabl. Enc. Méth., Orn., 2, livr. 91, p. 793, 1822—based on "Habia verde" Azara, No. 89; Paraguay to the La Plata River.

*Laniagra guyanensis* (not *Tanagra gujanensis* Gmelin) d'Orbigny, Voy. Amér. Mérid., Ois., p. 160, 1836—part, Prov. Yungas, Ayupaya, and Rio Grande, Bolivia; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 9, 1837—Bolivia (in part).

*Cyclaris guyanensis* Lafresnaye, Rev. Zool., 5, p. 133, 1842—part, Paraguay and Bolivia.

*Cyclorhis viridis* Sclater, Proc. Zool. Soc. Lond., 26, p. 448, 1858—Paraguay and Bolivia (diag.); idem, Cat. Coll. Amer. Bds., p. 46, 1862—Bolivia; Baird, Rev. Amer. Bds., 1, p. 392, 1866—part, spec. ex Bolivia; Berlepsch, Zeits. Ges. Orn., 2, p. 116, 1885—Paraguay and Tucumán (crit.); idem, Journ. Orn., 35, pp. 5, 114, 1887—Lambaré, Paraguay; idem, Ibis, 1888, p. 91—Paraguay, Tucumán, Salta, and Bolivia; Allen, Bull. Amer. Mus. N. H., 2, pp. 126, 134, 1889—part, Bolivia, Paraguay, and Argentina; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 399, 1890—Cordoba; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 3, 1895—Carpeguá, Paraguay; idem, l.c., 12, No. 292, p. 5, 1897—Tala, Salta; Ihering, Rev. Mus. Paul., 6, p. 318, 1904—Paraguay; Bruch, Rev. Mus. La Plata, 11, p. 256, 1904—Dept. Rosario, Salta; Lillo, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tucumán; Ihering, Cat. Faun. Braz., 1, p. 337, 1907—San Luis (range excl. Matto Grosso); Grant, Ibis, 1911, p. 89—part, Puerto Pinasco, Paraguay.

*Cyclorhis viridis viridis* Hartert and Venturi, Nov. Zool., 16, p. 167, pl. 2, fig. 20 (egg), 1909—Chaco (Ocampo, Mocoví) and Tucumán.

*Cyclarhis viridis* Oberholser, Proc. U. S. Nat. Mus., 25, p. 140, 1902—Sapucay, Paraguay; Bertoni, Faun. Parag., p. 61, 1914—Paraguay.

*Cyclarhis gujanensis viridis* Hellmayr, Nov. Zool., 15, p. 24, 1903—Paraguay, northern Argentina, and Bolivia (crit., meas.); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 366, 1910—Cosquin (Cordoba), San Luis, Salta, and Chaco; Hellmayr, Nov. Zool., 28, p. 192, 1921—Yungas, Bolivia (crit.); Giacomelli, El Hornero, 3, p. 68, 1923—La Rioja; Wetmore, Bull. U. S. Nat. Mus., 133, p. 366, 1926—Chaco (Las Palmas), Formosa (Riachó Pilaga), and Tucumán (Tapia) (habits); Friedmann, Bull. Mus. Comp. Zool., 68, p. 215, 1927—Concepción, Tucumán; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 307, 1930—Fortín Esteros and Villa Montes, Tarija, Bolivia (crit.).

<sup>1</sup> Additional material examined.—Ceará, 2.—Maranhão: Miritiba, 1.—Pernambuco: Pão d'Alho, near Recife, 1.—Bahia: Cabula, 1; Bahia, 31; Santa Rita, Rio Preto, 1; Fazenda Tabôa, Rio Preto, 1.—Goyaz: Porto Imperial, 1; Goyaz, 1; Rio Thesouras, 2; Rio Araguaya, 4.—Minas Geraes: Agua Suja, near Bagagem, 12.—São Paulo: Rio Paraná, 1.—Matto Grosso: Chapada, 18; Cuyabá, 1; Engenho do Cap Gama, 1; Urucúm, 4; Tapirapoan, 2.—Bolivia: Chiquitos, 2; San José, 1.

*Cyclorhis altirostris* Salvin, Ibis, (4), 4, p. 352, 1880—Salta (type in Salvin-Godman Collection, now in British Museum, examined); Gadow, Cat. Bds. Brit. Mus., 8, p. 319, 1883—Bolivia and Argentina; Sclater, Ibis, 1887, p. 323 (crit.; excl. White's record); Berlepsch, Ibis, 1888, p. 89—Paraguay, Salta, Tucumán, and Bolivia (excl. Chiquitos) (crit.); Sclater and Hudson, Arg. Orn., 1, p. 24, pl. 3, fig. 2, 1888—Paraguay and Salta; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 174, 1902—Tucumán; Baer, Ornith., 12, p. 215, 1904—Tapia, Tucumán.

*Cyclorhis ochrocephala* (not of Tschudi) Frenzel, Journ. Orn., 39, p. 118, 1891—Rio Tercero, Cordoba; Kerr, Ibis, 1892, p. 123—Fortín Page, lower Pilcomayo (spec. examined).

*Cyclorhis* sp. inc. Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 595—part, Yungas, Ayupaya, and Rio Grande, Bolivia (ex d'Orbigny); Kerr, Ibis, 1901, p. 223—Paraguayan Chaco.

**Range.**—Northern Argentina, west of the Rio Paraná, from Santa Fé, Chaco, and Formosa west to Cordoba, San Luis, La Rioja, Tucumán, and Salta; Paraguay; highlands of Bolivia.<sup>1</sup>

6: Argentina (Concepción, Tucumán, 5); Paraguay (Villa Rica, 1).

**\*Cyclarhis gujanensis ochrocephala Tschudi. OCHRE-CROWNED PEPPER SHRIKE.**

*Cyclarhis ochrocephala* Tschudi, Arch. Naturg., 11, (1), p. 362, 1845—southern Brazil and Buenos Aires [excl. Bolivia and Peru] (no type specified); Oberholser, Proc. U. S. Nat. Mus., 25, p. 140, 1902—Sapucay, Paraguay; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 366, 1910—Argentina (Corrientes, Entre Rios, Buenos Aires, Barracas al Sud); Bertoni, Faun. Parag., p. 60, 1914—Alto Paraná; Hellmayr, Nov. Zool., 28, p. 192, 1921—Corrientes (crit., range); Tremoleras, El Hornero, 2, p. 22, 1920—Canelones, San José, and Flores, Uruguay; Serié and Smyth, l.c., 3, p. 52, 1923—Santa Elena, Entre Rios; Pereyra, l.c., 3, p. 170, 1923—San Isidro, Buenos Aires; Wetmore, Bull. U. S. Nat. Mus., 133, p. 366, 1926—Berazategui, Buenos Aires, and San Vicente and Rio Negro, Uruguay (habits); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 184, 1926—Fazenda Durski, Invernadinha, Cará Pintada, and Therezina, Paraná.

<sup>1</sup> There is no difference whatever between Paraguayan birds (typical *viridis*) and others from Argentina (*altirostris*). As has been pointed out long ago by the late Count Berlepsch (Ibis, 1888, p. 89), Azara's description of the "Habia Verde" clearly refers to the large-billed pepper shrike with plumbeous basal spot to the lower mandible. This form is chiefly found west of the Paraná, though it is likewise widely diffused in the northern and western parts of Paraguay proper. Birds from Bolivia, except those occurring in the plains of Chiquitos, agree very well with the present form, too. Measurements are given in Nov. Zool., 15, p. 24, 1908.

**Additional material examined.**—Paraguay: Bernalcué (near Asunción), 3; Trinidad, 2; Fort Wheeler, Chaco, 3; General Pinedo, Chaco, 2.—Argentina: Mocoví, Santa Fé, 1; Ocampo, Santa Fé, 5; Cordoba, 1; Suncho Corral, Santiago del Estero, 1; Tucumán, 2; Tañi, Tucumán, 1; Sarmiento, Tucumán, 1; Salta, 4; Catadera, San Luis, 1.—Bolivia: Santa Cruz, 2; Samaipata, 3; Chulumani, 1; Yungas, 2.

- Cyclorhis ochrocephala* Sclater, Proc. Zool. Soc. Lond., 26, p. 448, 1858—southeastern Brazil; idem, Cat. Coll. Amer. Bds., p. 45, 1862—Brazil; Baird, Rev. Amer. Bds., 1, p. 391, 1866—Rio de Janeiro and Tigré (crit.); Pelzeln, Orn. Bras., 2, pp. 73, 138, 1868—Rio de Janeiro, São Paulo (Casa Pintada, Ypanema, Ytararé), and Paraná (Curytiba) (crit.); idem, Nunq. Otios., 2, p. 291, 1874—Nova Friburgo, Rio de Janeiro; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 437—Lagôa Santa, Mocambo, and Paracatú, Minas Geraes; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 116, 1885—Taquara, Rio Grande do Sul (crit.); Sclater, Ibis, 1887, p. 323 (crit.); Berlepsch, Ibis, 1888, pp. 87, 91—Rio de Janeiro, São Paulo, Rio Grande do Sul, Buenos Aires, and Corrientes (crit., range); Sclater and Hudson, Arg. Orn., 1, p. 23, pl. 3, fig. 1, 1888—"middle Argentine"; Allen, Bull. Amer. Mus. N. H., 2, pp. 127, 134, 1889—southeastern Brazil and Argentina (crit.); Aplin, Ibis, 1894, p. 165—Arroyo Grande and Rio Negro, Uruguay; Ihering, Rev. Mus. Paul., 2, p. 165, 1897—Villa Bella, Ilha de São Sebastião, São Paulo; idem, l.c., 3, p. 137, 1899—São Paulo, Tieté, and São Sebastião, São Paulo; idem, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Mundo Novo and Pedras Brancas, Rio Grande do Sul; idem, Rev. Mus. Paul., 4, p. 152, 1900—Cantagallo and Nova Friburgo, Rio de Janeiro; Miranda Ribeiro, Arch. Mus. Nac. Rio de Janeiro, 13, p. 183, 1906—Morro dos Carneiros, Itatiaya; Ihering and Ihering, Cat. Faun. Braz., 1, p. 338, 1907—São Paulo (Ypiranga, Rio Feio, Campos do Jordão, Ytararé, Baurú, Estação do Rio Grande), Minas Geraes (Itatiaya and Vargem Alegre), and Argentina (Tigré); Lüderwaldt, Zool. Jahrb. (Syst.), 27, p. 356, 1909—Itatiaya; Hartert and Venturi, Nov. Zool., 16, p. 167, 1909—Barracas al Sud, Buenos Aires; Chrostowski, Compt. Rend. Soc. Scient. Varsovie, 5, pp. 485, 499, 1912—Vera Guarany, Paraná.
- [*Cyclorhis viridis*] subsp. *a* *C. ochrocephala* Gadow, Cat. Bds. Brit. Mus., 8, p. 318, 1883—south Brazil.
- Cyclarhis ochrocephala ochrocephala* Dabbene, El Hornero, 1, p. 243, 1919—Isla Martín García, Buenos Aires; Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 654, 1924—Prov. of Buenos Aires; Holt, Bull. Amer. Mus. N. H., 57, p. 314, 1928—Serra do Itatiaya, Brazil.
- Laniagra guyanensis* (not *Tanagra gujanensis* Gmelin) d'Orbigny, Voy. Amér. Mérid., Ois., p. 160, 1836—part, Corrientes; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 9, 1837—part, Corrientes, Argentina.
- Cyclarhis guianensis* Swainson, Orn. Draw., Part 5, pl. 58, 1837; Darwin, Zool. Beagle, 3, p. 58, 1839—Maldonado.
- Cyclorhis viridis* (not *Saltator viridis* Vieillot) Cabanis, Mus. Hein., 1, p. 64, 1851—southern Brazil and Paraguay (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 159—Conchitas, Buenos Aires; Cabanis, Journ. Orn., 22, p. 84, 1874—Cantagallo, Rio de Janeiro; Doering, Period. Zool. Arg., 1, p. 253, 1874—Rio Guayquiraro, Corrientes; Durnford, Ibis, 1878, p. 58—Punta Lara, Prov. Buenos Aires; White, Proc. Zool. Soc. Lond., 1882, p. 595—Punta Lara; Barrows, Bull. Nutt. Orn. Cl., 8, p. 88, 1883—Concepción del Uruguay, Entre Rios; Allen, Auk, 6, p. 269, 1889 (crit.).

- Cyclorhis viridis* Burmeister, Syst. Uebers. Th. Bras., 3, p. 107, 1856—Rio de Janeiro and Nova Friburgo; idem, Journ. Orn., 8, p. 251, 1860—Paraná, Entre Rios; idem, Reise La Plata St., 2, p. 472, 1861—Paraná.
- Cyclorhis wiedi* (not of Pelzel) Ihering, Rev. Mus. Paul., 3, p. 137, 1899—Serra de Paranapiacaba, São Paulo; idem, Cat. Faun. Braz., 1, p. 338, 1907—Alto da Serra, São Paulo.
- Cyclorhis wiedi* Chubb, Ibis, 1910, p. 612—Sapucay, Paraguay (spec. examined).
- Cyclarhis wiedi* Bertoni, Seg. Contrib. Orn. Parag., in Rev. Inst. Parag., 1907 [Sep., p. 2]—Puerto Bertoni, Paraguay; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 435, 1910—Alto Paraná (ex Bertoni); idem, Bol. Soc. Physis, 1, p. 353, 1914—Iguazú (ex Bertoni); Bertoni, Faun. Parag., p. 61, 1914—Asunción.
- Cyclarhis viridis wiedi* Bertoni, Anal. Soc. Cient. Arg., 75, p. 97, 1913—Iguazú.
- Cyclarhis ochrocephala dabbenei* Bertoni, Rev. Chil. Hist. Nat., 17, No. 6, p. 220, Dec., 1913—northeastern Paraguay (type in coll. of A. W. de Bertoni).
- Cyclarhis jaczewskii* Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 184, 1926—Marechal Mallet, Paraná (type in Warsaw Museum;=worn plumage).

**Range.**—Southeastern Brazil, from southern and eastern Minas Geraes (Marianna; São Francisco; Mocambo; Paracatú; Lagôa Santa) and Espírito Santo (Victoria) to Rio Grande do Sul; Uruguay; northeastern Argentina, in provinces of Corrientes, Entre Rios, Misiones, and Buenos Aires; Paraguay (southern and eastern parts).<sup>1</sup>

23: Brazil (Rio das Velhas, near Lagôa Santa, 2; Therezopolis, Rio de Janeiro, 6; Victoria, São Paulo, 1; Joinville, Santa Catharina,

<sup>1</sup> Birds from Corrientes, Entre Rios, and Misiones agree well with Brazilian specimens, whereas those from Uruguay and Buenos Aires generally have the yellow jugular band narrower and paler in tone. They are, however, closely approached by certain individuals from São Paulo. Occasionally the maxilla is dark brown and the mandible dusky, with or without a paler tip. Such specimens we have seen from São Paulo (Alambary), Paraná (Serra do Mar), and Entre Rios (La Soledad). *C. o. dabbenei* Bertoni appears to have been based upon an individual of the same variety. In breeding plumage, when the brownish tips to the feathers have been worn off, the pileum becomes dingy gray, and we have little doubt that *C. jaczewskii*, described from a single January specimen taken in Paraná, where the brown-headed *C. g. ochrocephala* is also found, refers to that stage. Though we heretofore regarded *ochrocephala* as specifically distinct, Paraguayan material recently examined tends to show that it is merely a geographical race of the *gujanensis* group. The British Museum has six specimens from Sapucay, Paraguay. Four are typical *ochrocephala*. The two remaining ones have stouter, more elevated bills, more like *C. g. viridis*, with suggestions of a dusky basal spot to the lower mandible, and in one the rufous superciliars are broader and carried as far back as the posterior margin of the auriculars, thus showing the same extent as in *C. g. viridis*. Two additional examples from Sapucay exhibit all the characters of the latter form. Intergradation is therefore established in southern Paraguay. Otherwise the two pepper shrikes replace each other geographically. In Minas Geraes, *C. g. ochrocephala* inhabits the southern districts (Marianna, São Francisco,



1); Argentina, Misiones (Eldorado, 3; Puerto Segundo, 5); Uruguay (Quebrada de los Cuervos, north of Trienta y Tres, 3; Polanco, Minas, 1; Rio Uruguay, southwest of Dolores, Soriano, 1).

***Cyclarhis gujanensis virenticeps* Scater.<sup>1</sup> GREEN-CROWNED PEPPER SHRIKE.**

*Cyclorhis virenticeps* Scater, Proc. Zool. Soc. Lond., 28, p. 274, pl. 164, 1860—Babahoyo, Ecuador (type in coll. of P. L. Scater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 46, 1862—Babahoyo; Baird, Rev. Amer. Bds., 1, p. 393, 1866—Babahoyo (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 319—Tumbez, Peru; Berlepsch and Taczanowski, l.c., 1883, p. 542—Yaguachi and Guayaquil, Ecuador; Gadow, Cat. Bds. Brit. Mus., 8, p. 317, 1883—Ecuador; Taczanowski, Orn. Pér., 1, p. 449, 1884—Tumbez and Paucal, Peru; Scater, Ibis, 1887, p. 322—western Ecuador (crit.); Berlepsch, Ibis, 1888, pp. 85, 91—western Ecuador and northern Peru; Allen, Bull. Amer. Mus. N. H., 3, p. 135, 1889 (range); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Balzar, Ecuador; Berlioz, Bull. Mus. Nat. Hist., Paris, (2), 4, p. 234, 1932—Isla Silva, Ecuador.

*Cyclarhis virenticeps* Chapman, Bull. Amer. Mus. N. H., 55, p. 591, 1926—Chone, Chongocito, Guayaquil, Duran, La Puente, El Chiral, Santa Rosa, Portovelo, Punta Santa Ana, Casanga, Salvias, Las Piñas, Alamor, Guainche, Rio Pullango, and Loja, Ecuador (crit.).

**Range.**—Tropical zone of southwestern Ecuador, from the Rio Chone southward, and adjoining section of northwestern Peru, west of the Andes.<sup>2</sup>

etc.) and *C. g. cearensis* the extreme west, birds from the central part of the state (Lagôa Santa) being intermediate between the two. In Argentina, *C. g. ochrocephala* lives east of the Paraná in Corrientes and Entre Rios, while west of that river *C. g. viridis* takes its place.

**Additional material examined.**—Brazil.—Espírito Santo: Braço do Sul, Victoria, 2.—Rio de Janeiro: Rio de Janeiro, 7; Therezopolis, 8.—São Paulo: Victoria, 9; Alambary, 2; Piquete, 3; Casa Pintada, 2; Ypanema, 4; Ytararé, 1.—Paraná: Curytiba, 3; Roça Nova, Serra do Mar, 2; Castro, 1.—Rio Grande do Sul: Taquara do Mundo Novo, 2; São Lourenço, 1; Camaquã, 1.—Argentina: Corrientes (Santo Tomé), 2; La Soledad, Entre Rios, 2; Buenos Aires (Avellaneda, Barracas al Sud, Platanos, etc.), 7.—Paraguay: Sapucay, 8.

<sup>1</sup> *Cyclarhis gujanensis virenticeps* Scater and its Peruvian allies (*C. g. contrerasi*, *C. g. saturatus*) differ from the *C. gujanensis* group proper by lacking the gray on the crown, which is replaced by green and chestnut; olive yellow or yellowish green instead of pale gray auriculars; much greater extent of the yellow on throat and chest, etc. However, an adult female from Huancabamba (Mus. Comp. Zool., No. 79898) has the forecrown, behind the chestnut frontal band, largely gray, and also the anterior auriculars grayish, suggesting intergradation with *C. g. gujanensis*, found in the Tropical zone of eastern Peru. I have, therefore, no hesitation in accepting Mr. Zimmer's proposal to unite the green-crowned and gray-crowned groups in one "formenkreis."

<sup>2</sup> Birds from Chone, Manaví, and Guayas (Guayaquil, Yaguachi, Rio Salado) are above brighter, more yellowish green, than those from more southern localities, one from Zaruma, Prov. del Oro, being just as decidedly green as *C. g. contrerasi*. Of four specimens from Loja, three agree with the northern birds in the coloration

**\*Cyclarhis gujanensis contrerasi Taczanowski.<sup>1</sup> CHESTNUT-CAPPED PEPPER SHRIKE.**

*Cyclorhis contrerasi* Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 224, pl. 21—Tambillo, Prov. Jaen, northern Peru (type lost, formerly in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 160, 1927); idem, l.c., 1880, p. 192—Callacate, Peru; idem, l.c., 1882, p. 8—Chachapoyas, Dept. Amazonas (crit.); Gadow, Cat. Bds. Brit. Mus., 8, p. 321, 1883—Callacate; Taczanowski, Orn. Pér., 1, p. 450, 1884—Tambillo, Callacate, Cutervo, and Chachapoyas; Sclater, Ibis, 1887, p. 322—western Peru (crit.); Berlepsch, Ibis, 1888, pp. 85, 91—northern Peru; Allen, Bull. Amer. Mus. N. H., 2, p. 135, 1889—northern Peru; Salvin, Nov. Zool., 2, p. 3, 1895—Cajabamba and Succha, Huamachuco (spec. examined).

*Cyclarhis coutrerasi* [sic] Bangs and Noble, Auk, 35, p. 458, 1918—Perico (near Tabaconas) and Huancabamba, Dept. Piura (spec. examined).

*Cyclarhis virenticeps* (not of Sclater) Bangs and Noble, Auk, 35, p. 458, 1918—Tabaconas, Dept. Cajamarca (spec. examined).

**Range.**—Northern Peru, in the mountains bordering the Marañón Valley, extending east into the Valley of Huayabamba, Dept. San Martín, chiefly in the Temperate zone.

2: Peru (Hacienda Limón, ten miles west of Balsas, 2).

**\*Cyclarhis gujanensis saturatus Zimmer.<sup>2</sup> SOUTHERN CHESTNUT-CAPPED PEPPER SHRIKE.**

of the pileum, viz., forehead and superciliaries only chestnut, the remaining portion uniform green like the back. The fourth, however, has the feathers of the center and back of the crown margined with chestnut, and is barely distinguishable from certain individuals of *contrerasi*.

**Material examined.**—Ecuador: Chone, Manaví, 3; Yaguachi, Guayas, 1; Rio Salado, Guayas, 1; Guayaquil, 3; Zaruma, Prov. del Oro, 1; Loja, 4.

<sup>1</sup> *Cyclarhis gujanensis contrerasi* Taczanowski: Very near to *C. g. virenticeps*, but feathers on top and back of the crown more or less broadly margined with chestnut, this color sometimes concealing the green mesial disks; auriculars more greenish; size on average larger.

This form is extremely variable individually, specimens with the least amount of chestnut edges being barely separable from certain south Ecuadorian birds with chestnut-edged crown feathers. The intensity of the chestnut on forehead and superciliaries is subject to much variation, while hardly two examples are alike as to tone and width of the yellow pectoral area.

**Material examined.**—Dept. Piura: Huancabamba, 2.—Dept. Cajamarca: Perico, 1; Tabaconas, 1; Callacate, 1; Cajabamba, 2.—Dept. San Martín: Guayabamba, 1.—Dept. Libertad: Succha, Huamachuco, 1; Hacienda Limón, west of Balsas, 2; Choquisongo, north of Otuzco, 1.—Dept. Amazonas: Leimabamba, 1.

<sup>2</sup> *Cyclarhis gujanensis saturatus* Zimmer: Exceedingly close to *C. g. contrerasi*, but yellow on sides of head and anterior under parts much brighter, deep strontian yellow rather than sulphine yellow, also more extended posteriorly over the breast, and sides of the body more strongly suffused with ochraceous. Wing, 83½, (female) 80–88; tail, 72–75; bill, 16½–17.

Considering the great variability of *C. g. contrerasi*, this form needs confirmation by a larger series. Some specimens from Cajabamba are fully as large as the Cullcui birds, but not one of the northern examples has the flanks and sides so deeply ochraceous.

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*Cyclarhis gujanensis saturatus* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 12, p. 107, 1925—Cullcui, Marañón River, Dept. Huánuco, Peru (type in Field Museum of Natural History); idem, l.c., 17, p. 415, 1930—Cullcui.

**Range.**—Temperate zone of central Peru, in Dept. Huánuco (Cullcui, near Llata, sources of the Rio Marañón).

3: Peru (Cullcui, 3).

### *Cyclarhis nigrirostris nigrirostris* Lafresnaye. BLACK-BILLED PEPPER SHRIKE.

*Cyclarhis nigrirostris* Lafresnaye, Rev. Zool., 5, p. 133, 1842—"in Colombia"—Bogotá (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 346, 1930).

*Cyclarhis nigrirostris* Lafresnaye, Mag. Zool., (2), 5, Ois., pl. 33, text, pp. 1, 3, 1843—Bogotá; Hellmayr, Nov. Zool., 20, p. 234, 1913—part, Colombia (Bogotá, Santa Elena) and eastern Ecuador (Baeza); Chapman, Bull. Amer. Mus. N. H., 36, p. 542, 1917—part, Salencio, San Antonio, Cerro Munchique, Gallera, Cocal, Salento, Santa Elena, Rio Toché, La Palma, and Aguadita, Colombia.

*Cyclorhis nigrirostris* Sclater, Proc. Zool. Soc. Lond., 23, p. 151, 1855—Bogotá; idem, l.c., 26, p. 448, 1858—Nova Grenada; idem, Cat. Coll. Amer. Bds., p. 46, 1862—Bogotá; Baird, Rev. Amer. Bds., 1, p. 394, 1866—Bogotá (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Santa Elena, Colombia; Gadow, Cat. Bds. Brit. Mus., 8, p. 317, 1883—Colombia; Sclater, Ibis, 1887, p. 324—Bogotá and Antioquia; Berlepsch, Ibis, 1888, pp. 90, 91—Colombia; Allen, Bull. Amer. Mus. N. H., 2, p. 135, 1889—Colombia; Goodfellow, Ibis, 1901, p. 316—part, Baeza, eastern Ecuador.

*Cyclarhis nigrirostris nigrirostris* Chapman, Bull. Amer. Mus. N. H., 55, p. 591, 1926—Baeza and below Oyacachi, Ecuador.

**Range.**—Subtropical zone of eastern Ecuador (Baeza; below Oyacachi) and Colombia, excepting Santa Marta region and extreme southwestern section (Nariño).<sup>1</sup>

### *Cyclarhis nigrirostris atrirostris* Sclater.<sup>2</sup> WESTERN BLACK-BILLED PEPPER SHRIKE.

*Cyclorhis atrirostris* Sclater, Ibis, (5), p. 324, pl. 10, 1887—"Ecuador" (the type examined in the British Museum is from Camino de Manaví, western

<sup>1</sup> Specimens from eastern Ecuador agree with the Colombian ones in having the forecrown (behind the chestnut frontal edge) conspicuously gray, and the whole basal half of the lower mandible clear yellowish abruptly contrasted with the black apical portion. The size of the bill varies much individually.

**Material examined.**—Colombia: Bogotá, 10; Santa Elena, Antioquia, 3.—Ecuador: Baeza, 3.

<sup>2</sup> *Cyclarhis nigrirostris atrirostris* Sclater: Similar to *C. n. nigrirostris*, but with less gray on the anterior crown, and lower mandible almost wholly black with only the extreme base horn color. Size about the same.

The type of *C. atrirostris* is a young bird partly in nestling plumage, and although the chief characters used for specific separation are due to immaturity

Ecuador;=juv.); Berlepsch, Ibis, 1888, pp. 90, 91—Ecuador (crit.); Allen, Bull. Amer. Mus. N. H., 2, p. 135, 1889—Ecuador (ex Sclater).

*Cyclarhis nigristrois mindoensis* Chapman, Amer. Mus. Nov., 143, p. 1, Nov., 1924—Mindó, western Ecuador (type in the American Museum of Natural History, New York).

*Cyclorhis nigristrois* (not of Lafresnaye) Goodfellow, Ibis, 1901, p. 316—part, Milligalli and Guala, western Ecuador.

*Cyclarhis nigristrois* Hellmayr, Nov. Zool., 20, p. 234, 1913—part, western Ecuador (Camino de Manaví, Guala, Milligalli) (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 542, 1917—part, Ricaurte (Nariño), Colombia.

*Cyclarhis nigristrois atrostris* Chapman, Bull. Amer. Mus. N. H., 55, p. 592, 1926—Mindó, Ecuador (crit.); Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 441, 1928—Iambo, Ecuador.

**Range.**—Subtropical zone of western Ecuador and extreme south-western Colombia (Ricaurte, Nariño).

## Family LANIIDAE. Shrikes

### Genus LANIUS Linnaeus

*Lanius* Linnaeus, Syst. Nat., 10th ed., 1, p. 93, 1758—type, by subs. desig. (Swainson, Zool. Journ., 1, p. 294, 1824), *Lanius excubitor* Linnaeus.

#### \**Lanius excubitor borealis* Vieillot.<sup>1</sup> NORTHERN SHRIKE.

*Lanius borealis* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," p. 80, pl. 50, publ. 1808—North America: "le Canada et surtout la baie d'Hudson . . . sont les contrées de l'Amérique qu'elle préfère pour s'occuper d'une nouvelle génération" (type in coll. of P. L. Vieillot); Gadow, Cat. Bds. Brit. Mus., 8, p. 240, 1883—part; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 237, 1904—part (monog., full bibliog.).

*Collyrio chemungensis* "Gregg, Proc. Almira Acad., 1 (p. 9 of reprint), 1870"—Chemung County, New York (=juv.).<sup>2</sup>

*Lanius borealis americanus* Bogdanow, Sorokoputui Russkoi, in Faunui Zap. Imp. Akad. Nauk, 39, pp. 102, 115, 1881—North America.

*Lanius excubitor borealis* A. H. Miller, Condor, 32, p. 164, 1930 (crit.); idem, Univ. Calif. Pub. Zool., 38, p. 47, 1931 (monog.).

**Range.**—Hudsonian zone and locally in the Canadian zone of North America, from northern Ungava to southern Ontario and

Sclater's name must be adopted for the western form, which may be distinguished by having only the extreme base of the lower mandible dull brownish.

**Material examined.**—Colombia: Ricaurte, Nariño, 1.—Western Ecuador: Camino de Manaví, 1 (the type); Guala, 1; Mindó, 3.

<sup>1</sup> I quite agree with Hartert and Alden H. Miller that this shrike is merely a geographic race of the European Gray Shrike (*L. excubitor*).

<sup>2</sup> Quoted from Ridgway (Bull. U. S. Nat. Mus., 50, Part 3, p. 240). We have not seen this publication.

southern Quebec, west at least to the east side of Hudson Bay; winters southward to Kentucky, Virginia, and North Carolina.

23: Connecticut (East Hartford, 5); Massachusetts (Boston, 1; Wakefield, 1; Cambridge, 1); New York (Shelter Island, 1); Illinois (Chicago, 1; Waukegan, 1); Wisconsin (Beaver Dam, 10; Milton, 2).

**\**Lanius excubitor invictus* Grinnell.<sup>1</sup> NORTHWESTERN SHRIKE.**

*Lanius borealis invictus* Grinnell, Pac. Coast Avifauna, 1, p. 54, 1900—Kowak River, Alaska (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley, Calif.); idem, l.c., 2, p. 61, 1902—in winter south to California (Nicasio, Marysville, and Calaveras); idem, Condor, 3, p. 22, 1901—Kadiak Island, Alaska; idem, l.c., 11, p. 206, 1909—Forty Miles, Yukon Territory; idem, l.c., 12, p. 43, 1910—Fort Yukon; Bishop, l.c., 17, p. 189, 1915—British Columbia, Montana, etc. (crit.).

*Lanius borealis* (not of Vieillot) Gadow, Cat. Bds. Brit. Mus., 8, p. 240, 1883—part; Hartlaub, Journ. Orn., 31, p. 270, 1883—mouth of the Chilcat River, Alaska; Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 237, 1904—part (monog., full bibliog.).

*Lanius excubitor invictus* A. Miller, Univ. Calif. Pub. Zool., 38, p. 52, 1931 (monog.).

*Lanius major* (not of Pallas nor Gmelin) Schallow, Auk, 1, p. 292, 1884—mouth of the Chilcat River, Alaska.

*Lanius mollis* (not of Eversmann) Mailliard and Hanna, Condor, 23, p. 93, 1921—west of Sitka, Alaska; Swarth, Condor, 29, p. 205, 1927 (crit.).

**Range.**—Hudsonian zone of northwestern North America, from northwestern Alaska and Mackenzie south to extreme northern British Columbia, Alberta, and Saskatchewan; winters irregularly south to northern California, Arizona (casually), New Mexico, and Texas, east to Minnesota.

2: Colorado (Fort Lyon, 2).

**\**Lanius ludovicianus ludovicianus* Linnaeus. LOGGERHEAD SHRIKE.**

*Lanius ludovicianus* Linnaeus, Syst. Nat., 12th ed., 1, p. 184, 1766—based on "La Pie-griesche de la Louisiane" Brisson, Orn., 2, p. 162, pl. 15, fig. 2; Louisiana (type in coll. of M. Réaumur).<sup>2</sup>

<sup>1</sup> *Lanius excubitor invictus* Grinnell: Similar to *L. e. borealis*, but larger, with more white on wings and tail; rump more conspicuously white; scapulars and extreme forehead more whitish; under parts also whiter and less distinctly vermiculated.

<sup>2</sup> As pointed out by A. H. Miller (Univ. Calif. Pub. Zool., 38, p. 54, 1931), Brisson's description, the sole basis of the specific name proposed by Linnaeus, might refer with an equal degree of probability to either *ludovicianus*, *migrans*, or *excubitorides*. In view of the impossibility of a conclusive decision as to which of the three races mentioned should bear the name *L. ludovicianus*, the type specimen forwarded by Count de la Galissonière to M. Réaumur being obviously lost, it seems highly desirable to conserve the current use of the name.

(?) *Lanius septentrionalis* Gmelin, Syst. Nat., 1, (1), p. 306, 1788—based on "Northern Shrike" Latham, Gen. Syn. Bds., 1, (1), p. 165; "from the northern parts of America" (type in Leverian Museum); Shaw, Gen. Zool., 7, (2), p. 331, 1809—based on the same.<sup>1</sup>

*Lanius americanus* Latham, Ind. Orn., 1, p. 69, 1790—based on "Pie-grieches de la Louisiane" Daubenton, Pl. Enl., pl. 397; Louisiana.

*Lanius ardosiaceus* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, "1807," pl. 81, pl. 51, 1808—"à la Georgie, aux Florides, et à la Louisiane" (type in coll. of P. L. Vieillot).

*Lanius carolinensis* Wilson, Amer. Orn., 3, p. 57, pl. 22, fig. 5, 1811—"the warmer parts of the United States" (type in Peale's Museum).

*Lanius ludovicianus ludovicianus* Palmer, Auk, 15, p. 248, 1898 (range, crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 241, 1904 (monog., full bibliog.); Miller, Univ. Calif. Pub. Zool., 38, p. 54, 1931 (monog.).

**Range.**—Lower Austral zone of the Atlantic and Gulf states of North America from southern North Carolina to southern Florida<sup>2</sup> and west through Georgia and Alabama to central Louisiana.

26: Connecticut (Bridgeport, 1); Indiana (Miller, 1); Illinois (Joliet, 3; Chicago, 2; Momence, 1; Lewistown, 1; Olive Branch, 1); Wisconsin (Beaver Dam, 14; Mendian, 1); Texas (El Paso, 1).

**\**Lanius ludovicianus migrans* Palmer. NORTHERN LOGGER-HEAD SHRIKE.**

*Lanius ludovicianus migrans* Palmer, Auk, 15, p. 248, 1898—Kingston, Ontario (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 243, 1904 (monog., full bibliog.); Miller, Univ. Calif. Pub. Zool., 38, p. 59, 1931 (monog.).

**Range.**—Transition and Upper Austral zones of eastern North America, from southeastern Manitoba, southern Ontario and Quebec, Maine, and New Brunswick south to northeastern Texas, eastern Oklahoma, Arkansas, Missouri, southern Illinois, northwestern Pennsylvania, Kentucky, western North Carolina, Mississippi, Louisiana, and the interior of Virginia; winters chiefly in the Mississippi Valley and Texas, irregularly north to New England.

<sup>1</sup> Although *L. septentrionalis* is generally quoted in the synonymy of *L. e. borealis*, certain passages in the description of Latham's "Northern Shrike," such as total length, the extent of the white tips to the outer tail feathers, etc., point rather to *L. ludovicianus*. The type appears to be lost. At all events, it is not among the specimens secured by the Vienna Museum from Sir Lever's collection. It may be remarked that both Gmelin and Shaw based their descriptions exclusively on Latham's "Northern Shrike," and I do not understand why Ridgway, Hartert, and others quote *L. septentrionalis* Shaw (not Gmelin).

<sup>2</sup> A resident race from southern Florida has been separated as *L. l. miamensis* by Bishop (Proc. Biol. Soc. Wash., 46, p. 203, 1933—type from Cutler, Dade County, Florida, in coll. of L. B. Bishop).

41: Florida (Lake Worth, 1; Starke, 1; Miami Beach, 6; Santa Rosa Island, 2; Pine Island, 3; Puntarasa, 6; City Point, 1; Wilson, 7; New River, 1; Gainesville, 2; Enterprise, 1; Mary Esther, 4; Town Point, 1; West Jupiter, 1; Eau Gallie, 1); Georgia (Savannah, 2); Louisiana (Chef Menteur, 1).

**\**Lanius ludovicianus excubitorides* Swainson. WHITE-RUMPED SHRIKE.**

*Lanius excubitorides* Swainson, in Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 115, pl. 34, pub. Feb., 1832—Carlton House, Saskatchewan (location of type not stated, probably lost).

*Lanius ludovicianus excubitorides* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 246, 1904—part (monog., full bibliog.); Phillips, Auk, 28, p. 83, 1911—Matamoros and San Fernando, Tamaulipas (Nov., Oct.); Miller, Univ. Calif. Pub. Zool., 38, p. 62, 1931 (monog.).

*Range.*—The Great Plains of North America, from central Alberta and Saskatchewan, south of latitude 54°, southward through western Texas, exclusive of the region around El Paso, to northern Coahuila, Nuevo Leon, and Tamaulipas, east to about longitude 100° in Manitoba, North and South Dakota, Nebraska, Kansas, and Oklahoma, but in Texas east to the vicinity of Austin and the mouth of the Colorado River, possibly as far as Houston; wintering from eastern New Mexico and western Texas south through the eastern and central parts of Mexico to the Isthmus of Tehuantepec (A. H. Miller).

13: Texas (Corpus Christi, 11; Ingram, 1); Wyoming (Fort Laramie, 1).

**\**Lanius ludovicianus mexicanus* Brehm. MEXICAN SHRIKE.**

*Lanius mexicanus* Brehm, Journ. Orn., 2, pp. 145, 148, 1854—Mexico (type, collected by Deppe, in the Berlin Museum; probably from the highlands of Vera Cruz, where most of Deppe's collecting in Mexico was effectuated); Sclater, Proc. Zool. Soc. Lond., 27, p. 375, 1859—Oaxaca; Dugès, La Nature, 1, p. 141, 1869—Guanajuato.

*Lanius excubitorides* (not *L. excubitorides* Swainson) Sclater, Proc. Zool. Soc. Lond., 1864, p. 173—Mexico City.

*Collurio excubitoroides* Baird, Rev. Amer. Bds., 1, p. 445, 1866—Mexico (part); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—temperate region of Vera Cruz.

*Lanius ludovicianus excubitorides* Cox, Auk, 12, p. 398, 1895—foot of Peak Orizaba, Vera Cruz (one spec., summer).

*Lanius ludovicianus mexicanus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 248, 1904—southern Mexico (monog., full bibliog.); Miller, Univ. Calif. Pub. Zool., 38, p. 64, 1931 (monog.).

*Range*.—Resident in central and southern Mexico, from southern Tamaulipas and Nuevo Leon, Zacatecas, Jalisco, and Tepic south through Vera Cruz and Oaxaca to the Isthmus of Tehuantepec (A. H. Miller).

2: Mexico (Iguala, Guerrero, 2).

**\**Lanius ludovicianus sonoriensis* A. H. Miller.<sup>1</sup> SONORA SHRIKE.**

*Lanius ludovicianus sonoriensis* Miller, Condor, 32, p. 155, 1930—White-tail Cañon, Chiricahua Mountains, Cochise County, Arizona (type in Museum of Vertebrate Zoology, Berkeley, Calif.); idem, Univ. Calif. Pub. Zool., 38, p. 67, 1931 (monog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 279, 1931—El Doctór, Saric, Tésia, Tecoripa, San Luis, fifteen miles southwest of Nogales, and twelve miles west of Magdalena, Sonora; Oberholser, Sci. Pub. Clevel. Mus. N. H., 1, p. 99, 1930—Huachuca Mountains, Arizona.

*Collurio excubitoroides* (not *Lanius excubitorides* Swainson) Baird, Rev. Amer. Bds., 1, p. 445, 1866—part.

*Lanius ludovicianus excubitorides* Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 246, 1904 (part, full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 178, 1906—Rosario, Las Bocas, La Boquilla, Santuario, Rio Sestín, and Rancho Baillon, northwestern Durango; Grinnell, Univ. Calif. Pub. Zool., 32, p. 192, 1928—Colorado desert, Lower California.

*Range*.—Resident from the Colorado desert of California and Colorado Delta region of Lower California east through Arizona south of Mohave, Yavapai, Navajo, and Apache counties to southern Grant, Luna, and Dona Ana counties in New Mexico, southwest along the valley of the Rio Grande to Brewster County, Texas, and through the states of Sonora, Chihuahua, northern Durango, and Sinaloa to the vicinity of Mazatlan (A. H. Miller).

33: New Mexico (Mimbres, 3; Deming, 11); Arizona (Calabasas, 10; Phoenix, 3; Huachuca Plains, 4); Texas (Laredo, 1; El Paso, 1).

***Lanius ludovicianus grinnelli* Oberholser.<sup>2</sup> GRINNELL'S SHRIKE.**

*Lanius ludovicianus grinnelli* Oberholser, Wils. Bull., 31, p. 87, Sept., 1919, San Fernando, Lower California (type in U. S. National Museum); Grinnell, Bull. U. S. Nat. Mus., 50, Part 3, p. 246, 1904 (part, full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 178, 1906—Rosario, Las Bocas, La Boquilla, Santuario, Rio Sestín, and Rancho Baillon, northwestern Durango; Grinnell, Univ. Calif. Pub. Zool., 32, p. 192, 1928—Colorado desert, Lower California.

<sup>1</sup>*Lanius ludovicianus sonoriensis* A. H. Miller: Nearest to *L. l. excubitorides*, but wing slightly, tail proportionately much longer; upper parts markedly darker, neutral gray rather than near gull gray; white tips to outer rectrices less extensive, and white area on wings also smaller; under surface more purely white. Wing (adult male, type), 103.3; tail, 110; bill, 12.

<sup>2</sup>*Lanius ludovicianus grinnelli* Oberholser: "Similar to *L. l. mearnsi*, but bill longer; upper tail coverts on average slightly darker, not abruptly white, but light gray; little or no white on scapulars; lower parts darker, more strongly tinged with gray, particularly on breast, sides, and flanks; upper surface on average darker; white terminal area on outer rectrix slightly smaller." (Oberholser, l.c.).



nell, Univ. Calif. Pub. Zool., 32, p. 192, 1928—northern Lower California;  
Miller, l.c., 38, p. 69, 1931—northern Lower California (monog.).

**Range.**—Northern Lower California, south to about latitude 29° west of the Sierra Juárez, but extending east to the Gulf coast south of latitude 31° (resident).

***Lanius ludovicianus nelsoni* Oberholser.<sup>1</sup> NELSON'S SHRIKE.**

*Lanius ludovicianus nelsoni* Oberholser, Condor, 20, p. 209, 1918—Todos Santos, southern Lower California (type in U. S. National Museum); Grinnell, Univ. Calif. Pub. Zool., 32, p. 194, 1928—Lower California; Miller, l.c., 38, p. 71, 1931—Lower California (monog.).

*Lanius ludovicianus mearnsi* (not of Ridgway, 1903) Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 252, 1904—part, Santa Margarita Island.

**Range.**—Central and southern Lower California, from latitude 28° south to Cape San Lucas, including Cedros and Santa Margarita and probably other adjacent islands (resident).

**\**Lanius ludovicianus gambeli* Ridgway. CALIFORNIA SHRIKE.**

*Lanius ludovicianus gambeli* Ridgway, Man. N. Amer. Bds., p. 467, 1887—"California, especially coast district" (lectotype in U. S. National Museum; type locality obviously Murphy, six miles northeast of Angels, Calaveras County; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 297, 1932); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 249, 1904 (monog.; full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 192, 1928—Lower California; Miller, l.c., 38, p. 77, 1931 (monog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 280, 1931—Obregón, Tésia, Tecoripa, and fifteen miles south of Nogales, Sonora (crit.).

*Lanius ludovicianus nevadensis* A. H. Miller, Univ. Calif. Pub. Zool., 32, p. 156, 1930—Lone Pine Creek, Inyo County, California (type in Museum of Vertebrate Zoology, Berkeley); idem, l.c., 38, p. 74, 1931 (monog.).

**Range.**—Western North America, from extreme southern British Columbia, Washington, and western Montana south through Oregon, Idaho, and parts of western Wyoming to California and the extreme northwest of Lower California; wintering in southern California, southern Arizona, western Mexico as far south as Morelos, and casually in southern Lower California.<sup>2</sup>

<sup>1</sup>*Lanius ludovicianus nelsoni* Oberholser: Nearest to *L. l. gambeli*, but bill larger; upper parts on average darker, though with the upper tail coverts more conspicuously whitish; lower surface more tinged with grayish, especially on posterior portion. Judging from Miller's account, this form is obviously very close to *L. l. gambeli*, but distinguishable by more grayish ventral surface.

<sup>2</sup>In the absence of adequate material for independent investigation we have followed Mr. van Rossem in combining *gambeli* and *nevadensis* under one heading. According to his researches, the last named race is "simply an intergrade between *gambeli* and *sonoriensis*."

16: Colorado (Paradox, 1); California (Los Angeles County, 1; Santa Clara, 1; Nicasio, 1; Victorville, 1; San Gabriel River, below El Monte, 1; Newcastle, 2; Corona, 1; Haywards, 1; Pasadena, 1; Monterey, 1; West Side, 1; Solano County, 3).

***Lanius ludovicianus anthonyi* Mearns. ISLAND SHRIKE.**

*Lanius ludovicianus anthonyi* Mearns, Auk, 15, p. 261, 1898—Santa Cruz Island, Santa Barbara group, California (type in U. S. National Museum); Oberholser, Proc. U. S. Nat. Mus., 22, p. 233, 1900—[Santa Cruz Island], Santa Barbara group (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 3, p. 251, 1904—Santa Cruz Island (monog., bibliog.); Miller, Univ. Calif. Pub. Zool., 38, p. 82, 1931 (monog.).

*Range*.—Islands of Santa Cruz, Anacapa, Santa Rosa, and Santa Catalina, California (resident).

***Lanius ludovicianus mearnsi* Ridgway. SAN CLEMENTE SHRIKE.**

*Lanius ludovicianus mearnsi* Ridgway, Proc. Biol. Soc. Wash., 16, p. 108, 1903—San Clemente Island, Santa Barbara group, California (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 3, p. 252, 1904—part, San Clemente Island; Miller, Univ. Calif. Pub. Zool., 38, p. 84, 1931—San Clemente Island (monog.).

*Range*.—San Clemente Island, California (resident).<sup>1</sup>

**Family STURNIDAE. Starlings**

**Genus STURNUS Linnaeus**

*Sturnus* Linnaeus, Syst. Nat., 10th ed., 1, p. 167, 1758—type, by tautonymy, "*Sturnus*" = *Sturnus vulgaris* Linnaeus.

<sup>1</sup> Several Old World species of shrikes have been erroneously credited to North America.

(1) *Lanius elegans* Swainson.

*Lanius elegans* Swainson, in Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 122, pub. Feb., 1832—"the fur countries" (type in the British Museum).

The type proved to be referable to the Gray Shrike of southern Algeria and Tunisia, long known under the name of *L. hemileucurus* Finsch and Hartlaub. Cf. Ogilvie-Grant, Nov. Zool., 9, p. 457, 1902, and Hartert, Vög. Paläarkt. Fauna, 1, p. 427, 1907.

(2) *Lanius ludovicianus robustus* (Ridgway).

*Collurio ludovicianus* var. *robustus* (Baird MS.) Ridgway, Amer. Natur., 7, p. 609, Oct., 1873—"California" (type in the Academy of Natural Sciences, Philadelphia).

*Lanius bairdi* Stejneger, Arch. Math. Naturvid. Kristiania, 3, pp. 326, 330, 1878—based on *Collyrio elegans* Baird, etc.

This turned out to be the same as *Lanius excubitor algeriensis* Lesson, of northern Algeria. Cf. Ridgway, Auk, 14, p. 323, 1897.

**\**Sturnus vulgaris vulgaris* Linnaeus. STARLING.**

*Sturnus vulgaris* Linnaeus, Syst. Nat., 10th ed., 1, p. 167, 1758—"Europe"; restricted type locality, Sweden; Ridgway, Bull. U. S. Nat. Mus., 50, Part 4, p. 281, 1907 (monog., full bibliog.); Chapman, Nat. Hist., 25, p. 480, 1925 (distribution in the United States); Cooke, U. S. Dept. Agric., Circular 336, 1925.

**Range.**—Europe. Introduced in 1890 in New York City, now distributed as far north as New Brunswick, southwestern Quebec, and southeastern Ontario, west to Iowa, Kansas, Arkansas, and Oklahoma, south to Texas and Florida.<sup>1</sup>

19: Connecticut (Fairfield, 1; Bridgeport, 1; Derby, 1); New York (Shelter Island, 15); Pennsylvania (Gynnedd, 1).

**Genus ACRIDOTHERES Vieillot<sup>2</sup>**

*Acridotheres* Vieillot, Anal. Nouv. Orn. Elém., p. 42, 1816—type, by subs. desig. (Gray, Cat. Gen. Subgen. Bds., p. 67, 1855), *Paradisea tristis* Linnaeus.

***Acridotheres cristatellus cristatellus* (Linnaeus). CRESTED MYNAL.**

*Gracula cristatella* Linnaeus, Syst. Nat., 10th ed., 1, p. 109, 1758—based on "The Chinese Starling" Edwards, Nat. Hist. Bds., 1, p. 19, pl. 19; China.

*Acridotheres cristatellus* Monro, Canad. Field-Naturalist, 36, pp. 32, 54, 1922—Vancouver, British Columbia.

**Range.**—Southern China. Introduced and naturalized in Vancouver, British Columbia, has spread thence up the Fraser River Valley and to other points.

**Family COEREBIDAE. Honey Creepers**

**Genus DIGLOSSA Wagler<sup>3</sup>**

*Diglossa* Wagler, Isis, 1832, p. 280—type, by monotypy, *Diglossa baritula* Wagler.

*Serrirostrum* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 24, 1838—type, by subs. desig. (Sclater, Ibis, 1875, p. 206), *Serrirostrum carbonarium* Lafresnaye and d'Orbigny.

<sup>1</sup> For recent extensions in the westward migration of the Starling consult "The Auk" (43, 1926, and succeeding vols.).

<sup>2</sup> The recognition of the genus *Aethiopsar* Oates does not seem to be warranted.

<sup>3</sup> *Campylops* Lichtenstein, "Abhandl. Berl. Acad. 1837, cum tab.," is quoted as a synonym by Cabanis (Mus. Hein., 1, p. 97, 1851). The paper referred to does not appear to have been published. In Lichtenstein's Nomencl. Av. Mus. Berol., 1854, p. 56, *Campylops* is an unidentifiable nomen nudum.

- Agrilorhinus* Bonaparte, Nuovi Ann. Sci. Nat. Bologna, 1, No. 3, p. 408, 1838—type, by monotypy, *Agrilorhinus siltaceus* Bonaparte=*Diglossa baritula* Wagler.
- Uncirostrum* Lafresnaye, Rev. Zool., 2, p. 100, 1839—new name for *Serrirostrum* Lafresnaye and d'Orbigny.
- Ancylorhinus* Sclater, Ibis, (3), 5, p. 204, 1875—emendation of *Agrilorhinus* Bonaparte.
- Diglossopsis* Sclater, Ann. Mag. Nat. Hist., (2), 17, p. 467, 1856—type, by orig. desig., *Diglossopsis caerulescens* Sclater.
- Tephrodiglossa* Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 273, 1864—type, by monotypy, *Serrirostrum carbonarium* Lafresnaye and d'Orbigny.
- Pyrrhodiglossa* Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 274, 1864—type, by subs. desig. (Sclater, Ibis, 1875, p. 206), *Diglossa mystacalis* Lafresnaye.
- Cyanodiglossa* Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 274, 1864—type, by subs. desig. (Sclater, Ibis, 1875, p. 206), *Agrilorhinus personatus* Fraser=*Uncirostrum cyaneum* Lafresnaye.
- Melanodiglossa* Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 274, 1864—type, by subs. desig. (Sclater, Ibis, 1875, p. 206), *Uncirostrum La Fresnayii* Boissonneau.

**\*Diglossa baritula baritula** Wagler. MEXICAN DIGLOSSA.

- Diglossa baritula* Wagler, Isis, 1832, p. 281—Mexico (descr. male and female; types in Würzburg Museum, now in Munich Museum, examined); Hahn, Orn. Atlas, livr. 12, p. 2, pl., Nos. 1, 2, 1837—Mexico (types figured); Hartlaub, Rev. Zool., 5, p. 56, 1842—Mexico (crit., synonym.); Gray and Mitchell, Gen. Bds., 1, p. 137, pl. XLII, 1846—Mexico; Cabanis, Mus. Hein., 1, p. 97, 1851—Mexico (synonym.); Sclater, Proc. Zool. Soc. Lond., 24, p. 286, 1856—near Cordoba, Mexico; idem, l.c., 27, p. 364, 1859—vicinity of Jalapa, Vera Cruz; idem, l.c., 27, p. 376, 1859—Juquila and Totontepec, Oaxaca; idem, l.c., 1864, p. 173—vicinity of Mexico City; Sclater, Cat. Coll. Amer. Bds., p. 48, 1862—part, Jalapa, Mexico; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 273—Mexico (crit.); Sumichraast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—alpine region of Vera Cruz; Dugès, La Nature, 1, p. 140, 1869—Guanajuato, Mexico; Sclater, Ibis, 1875, p. 207—part, southern Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 242, 1883—part, Mexico (valley of Mexico, above Vera Cruz, Jalapa, Juquila, Totontepec); Sclater, Cat. Bds. Brit. Mus., 11, p. 3, 1886—part, spec. a-i, near Mexico City and Jalapa, Mexico; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 140, 1886—San Salvador El Verde (Huejotringo), Puebla; Lantz, Trans. Kans. Acad. Sci., 16, p. 223, 1899—Coatepec, Vera Cruz; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 380, 1902—part, southern Mexico.
- Agrilorhinus siltaceus* Bonaparte, Nuovi Ann. Sci. Nat. Bologna, 1, No. 3, p. 408, 1838—Mexico (type in Florence Museum).
- Uncirostrum brelayi* Lafresnaye, Rev. Zool., 2, p. 100, 1839—Mexico (type in coll. of M. Brelay, Bordeaux;=male).
- Uncirostrum siltaceum* Lafresnaye, Rev. Zool., 2, p. 292, 1839—Mexico (crit.).

*Agriolorhinus olivaceus* Fraser, Proc. Zool. Soc. Lond., 8, p. 22, July, 1840—Mexico (type in coll. of Zool. Soc., now in British Museum;=female).

**Range.**—Highlands of southern Mexico, in states of Guanajuato, Michoacan, Colima, Mexico, Morelos, Puebla, Vera Cruz, Oaxaca, and Guerrero.<sup>1</sup>

2: Mexico (unspecified, 2).

**\*Diglossa baritula montana Dearborn.<sup>2</sup> GUATEMALAN DIGLOSSA.**

*Diglossa montana* Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 125, 1907—Sierra Santa Elena, near Tecpam, Guatemala (type in Field Museum).

*Diglossa baritula* (not of Wagler) Sclater and Salvin, Ibis, 1859, p. 14—Guatemala; Sclater, Cat. Coll. Amer. Bds., p. 48, 1862—part, spec. a, Guatemala; idem, Ibis, 1875, p. 207—part, Vera Paz and Volcan de Fuego, Guatemala; Salvin, Cat. Strickl. Coll., p. 174, 1882—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 242, 1883—part, Guatemala (Quezaltenango, Calderas, Volcan de Fuego, Santa Barbara); Sclater, Cat. Bds. Brit. Mus., 11, p. 3, 1886—part, spec. j-o, Quezaltenango, Calderas, Coban, and Santa Cruz Mountains, Guatemala; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 380, 1902—part, Guatemala.

*Diglossa baritula montana* Griscom, Bull. Amer. Mus. N. H., 64, p. 371, 1932—Santa Ilinia, San Lucas, and Tecpam, Guatemala (crit.).

**Range.**—Highlands of Guatemala and extreme southeastern Mexico, in State of Chiapas (Volcan de Tacana).

3: Guatemala (Sierra Santa Elena, near Tecpam, 2; Tecpam, 1).

**Diglossa sittoides parva Griscom.<sup>3</sup> HONDURAN DIGLOSSA.**

<sup>1</sup> *Additional material examined* (adult males, British Museum).—Colima: Sierra Nevada de Colima, 3.—Guerrero: Chilpancingo (Omiteme), alt. 8,000 ft., 6.—Mexico, valley of Mexico: Tetelco (Xochimilco), 3; Hacienda Eslava (Tlapam), 1; Chimalpa (Tacubaya), 2; Ajusco, 5.—Oaxaca: Totontepec, 1; Villa Alta, 2.

<sup>2</sup> *Diglossa baritula montana* Dearborn: Adult male similar to *D. b. baritula*, but under parts decidedly deeper rufous, with the slate gray extending down over the whole throat and foreneck instead of being confined to the upper throat; female evidently not distinguishable.

The racial characters of this form are well marked in a series of thirteen adult males from Guatemala. Certain Mexican examples, notably one from Sierra Nevada de Colima and two from the valley of Mexico (Ajusco and Tetelco), closely approach *montana* in the extent of the slate gray throat, though they are not so deeply rufous below. Two adult males from Volcan de Tacana, Chiapas, are perfectly typical of the Guatemalan race.

*Material examined.*—Mexico, Chiapas: Volcan de Tacana, alt. 11,000 ft. (March, 1897. W. B. Richardson), 2.—Guatemala: Sierra Santa Elena, 2; Quezaltenango, 1; San Martín, 3; Chuipaché, alt. 10,000 ft., 4; Santa Maria, 3; Calderas, Volcan de Fuego, 1.

<sup>3</sup> *Diglossa sittoides parva* Griscom: Resembling *D. s. montana*, but smaller, with shorter and slenderer bill; adult male darker and duller cinnamon below; female and immature male with more cinnamon, less olive below. Wing, 53½–54½, (female) 51½; width of culmen at gape, 3–3½ (Griscom, l.c.).

*Diglossa baritula parva* Griscom, Proc. New Engl. Zool. Cl., 13, p. 61, 1932—Rancho Quemado, district of Achagua, Honduras (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Range*.—Highlands of Honduras.

**\**Diglossa baritula plumbea* Cabanis.<sup>1</sup> COSTA RICAN DIGLOSSA.**

*Diglossa plumbea* Cabanis, Journ. Orn., 8, p. 411, 1860—Costa Rica (type in Berlin Museum; descr. male); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 275—Costa Rica (crit.); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 97, 1868—San Juan and Quebrada Honda, Costa Rica; Frantzius, Journ. Orn., 17, p. 297, 1869—Irazú, San Juan, and Las Cruces de la Candelaria, Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 185—Volcan de Chiriquí, Panama; Selater, Ibis, 1875, p. 217—Costa Rica and "Veragua" [=Chiriquí] (monog.); Boucard, Proc. Zool. Soc. Lond., 1878, p. 54—Cartago, Navarro, Naranjo, Irazú, and La Laguna, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 243, pl. 15a, figs. 1, 2, 1883—Costa Rica and Chiriquí; Selater, Cat. Bds. Brit. Mus., 11, p. 9, 1886—Costa Rica and Volcan de Chiriquí (monog.); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Volcan de Irazú, Costa Rica; Cherrie, Proc. U. S. Nat. Mus., 14, p. 529, 1891—Costa Rica (descr. young); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 381, 1902—Costa Rica and Chiriquí (monog.); Bangs, Proc. New Engl. Zool. Cl., 3, p. 63, 1902—Boquete, Chiriquí; Carriker, Ann. Carnegie Mus., 6, p. 824, 1910—Costa Rica (habits); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 274, 1910—Coliblanco and Volcan de Turrialba, Costa Rica (habits); Moller, Zeits. Mikr.-Anat. Forsch., 28, p. 372, 1932 (tongue).

*Range*.—Highlands of Costa Rica and extreme western Panama (Volcan de Chiriquí).<sup>2</sup>

30: Costa Rica (Volcan Turrialba, 11; Coliblanco, 16; Volcan Irazú, 3).

***Diglossa baritula veraguensis* Griscom.<sup>3</sup> VERAGUAN DIGLOSSA.**

*Diglossa plumbea veraguensis* Griscom, Amer. Mus. Nov., 280, p. 16, 1927—Chitrá, Veragua, Panama (type in the American Museum of Natural History, New York).

<sup>1</sup> This form, while differing in the male sex from its more northern allies by the uniform slaty coloration, without any rufous, of the under parts, is obviously but a strongly developed derivative of *D. baritula*. The Guatemalan race (*D. b. montana*), by its more extensively gray throat, marks a decided step in the direction of the Costa Rican bird, and the close resemblance of the females affords additional evidence for their genetic relationship.

<sup>2</sup> Five skins from Chiriquí (Boquete) agree with a Costa Rican series. Fifty specimens examined.

<sup>3</sup> *Diglossa baritula veraguensis* Griscom: Nearest to *D. b. plumbea*; adult male differing only in the blackish slate of the pileum being distinctly demarcated from the deep bluish slate of the back; female grayer olive both above and below, with a faint bluish cast above, especially on the wings (Griscom, l.c.).

*Range*.—Western Panama (Chitrá, Pacific slope of the Cordillera of Veragua).

**Diglossa baritula<sup>1</sup> hyperythra Cabanis.<sup>2</sup> CABANIS'S DIGLOSSA.**

*Diglossa hyperythra* Cabanis, Mus. Hein., 1, p. 97, 1851—Caracas (descr. male; type in Heine Collection, Halberstadt, examined).

*Diglossa sittoides hyperythra* Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 165, 1924—Galipán, Cerro del Avila, Venezuela (crit.).

*Diglossa similis* (not of Lafresnaye) Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 166, 170—Caracas (crit.).

*Diglossa sittoides similis* Bangs, Proc. Biol. Soc. Wash., 12, p. 179, 1898—San Miguel, Colombia; idem, Proc. New Engl. Zool. Cl., 1, p. 80, 1899—San Sebastian and El Mamón, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—Santa Marta region (ex Bangs); Todd and Carriker, Ann. Carnegie Mus., 14, p. 465, 1922—Santa Cruz and Pueblo Viejo, Colombia (crit.).

*Diglossa* sp. Salvin and Godman, Ibis, 1880, p. 119—San Sebastian, Colombia.

*Diglossa sittoides* (not *Serrirostrum sittoides* Lafresnaye and d'Orbigny) Sclater, Ibis, 1875, p. 208—part, Caracas, Venezuela; idem, Cat. Bds. Brit. Mus., 11, p. 4, 1886—part, spec. a, g, Caracas and San Sebastian.

*Range*.—Subtropical zone of the coast mountains of Venezuela (vicinity of Caracas) and Colombia (Santa Marta region).

**\*Diglossa baritula d'orbignyi (Boissonneau).<sup>3</sup> D'ORBIGNY'S DIGLOSSA.**

<sup>1</sup> The South American representatives of this group, heretofore combined under the specific term *sittoides*, revert in the male sex to the rufescent under parts of the Mexican and Guatemalan races, though the coloration is of a much paler tone, lacking, besides, all gray on throat, cheeks, and malar region. The females are barely separable from those of *D. b. plumbea*.

<sup>2</sup> *Diglossa baritula hyperythra* Cabanis: Adult male similar to *D. s. d'orbignyi* in having the under parts nearly uniform cinnamomeous without a buffy abdominal area, but sides of the head not so dark, plumbeous rather than blackish slate, and pileum hardly darker than the back. Female seemingly not distinguishable. Wing (adult males), 56–58; tail, 45–47; bill, 10–11.

Three adult males from Caracas and three others from the Santa Marta Mountains, while closely resembling *D. s. d'orbignyi*, appear to differ by lighter, less blackish slate coloration of the top and sides of the head. Until further material demonstrates its invalidity, I prefer to keep this form separate.

*Material examined*.—Venezuela: Caracas, 2; Galipán, Cerro del Avila, 2.—Colombia: El Mamón, 2; San Sebastian, 1.

<sup>3</sup> *Diglossa baritula d'orbignyi* (Boissonneau): Differs from *D. b. sittoides* by smaller size, by somewhat stouter bill, and in the male sex by darker plumbeous back; much darker (blackish slate) pileum, which forms a dark cap; more blackish sides of the head, passing often into velvety black in the loreal region; finally by deeper, more uniform cinnamomeous under parts. Wing (adult males), 55–59; tail, 44–47; bill, 10–11.

Birds from Mérida are identical with a series from the east Colombian Andes. According to Chapman, the inhabitants of the central and western Andes belong likewise to the present form.

*Material examined*.—Colombia: La Holanda, 2; Bogotá, 16.—Venezuela: Mérida, 6; El Valle, 3; Culata, 4.

*Uncirostrum d'Orbigny* Boissonneau, Rev. Zool., 3, p. 5, 1840—Santa Fé de Bogotá, Colombia (location of type unknown; descr. of young male).<sup>1</sup>

*Diglossa similis* Lafresnaye, Rev. Zool., 9, p. 318, 1846—Bogotá (descr. of adult male; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 394, 1930); Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 48, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 273—Bogotá (crit.).

*Diglossa sittoides* (not *Serrirostrum sittoides* Lafresnaye and d'Orbigny) Sclater, Ibis, 1875, p. 208—part, Colombia; idem and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Retiro and Concordia; Salvin, Cat. Strickl. Coll., p. 174, 1882—Bogotá; Sclater, Cat. Bds. Brit. Mus., 11, p. 4, 1886—part, spec. b-f, n, o, Bogotá.

*Diglossa sittoides similis* Chapman, Bull. Amer. Mus. N. H., 36, p. 579, 1917—San Antonio, Cerro Munchique, Miraflores, Salento, Rio Toché, San Agustín, La Candela, La Holanda, and Quetame, Colombia.

*Diglossa d'orbignii* Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá.

**Range.**—Subtropical zone of Colombia (except Santa Marta Mountains) and extreme western Venezuela (Cordillera of Mérida).

6: Colombia (Bogotá, 1; La Holanda, Cundinamarca, 1); Venezuela (Culata, Mérida, 4).

**\**Diglossa baritula decorata* Zimmer.<sup>2</sup> PERUVIAN CINNAMON-BELLIED DIGLOSSA.**

*Diglossa sittoides intermedia* (not *Diglossa intermedia* Cabanis, 1851) Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 292, 1913—Cajamarca, Peru (type in Field Museum); Chapman, Bull. Amer. Mus. N. H., 55, p. 637, 1926—Pichincha, Tumbaco, Celica and Zamora, Ecuador.

*Diglossa sittoides decorata* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 416, 1930—new name for *D. sittoides intermedia* Cory, preoccupied; Chinchao and Huachipa, Peru.

*Diglossa sittoides* (not *Serrirostrum sittoides* Lafresnaye and d'Orbigny) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Auquimarca and Pumamarca, Dept. Junín, Peru; idem, l.c., 1882, p. 8—Achamal, Peru;

<sup>1</sup> Although the type is not available for reexamination, I fully concur with Mr. Zimmer (Field Mus. Nat. Hist., Zool. Ser., 17, p. 416, 1930) that there is hardly any doubt as to the applicability of the name *d'orbignii*. Boissonneau calls the under parts "blanc jaunâtre, tirant un peu sur le roussâtre à la gorge et aux tectrices inférieures de la queue," which fits the young male of "*D. s. similis*" auct. exceedingly well, and cannot possibly refer to the female of *D. a. albilatera* with deep clay colored lower surface and silky white axillary tufts.

<sup>2</sup> *Diglossa baritula decorata* Zimmer: Very close to *D. b. sittoides*, but rather smaller; tertiaries tipped with buffy white to cinnamon; forehead and anterior part of crown lighter and brighter than the back instead of being uniform with the latter; female barely distinguishable. This is rather an unsatisfactory race, though its slightly smaller size, together with the buffy- or cinnamon-tipped tertiaries in the male sex may perhaps serve to distinguish it. These buffy spots are very rarely suggested in Bolivian examples, which, besides, are generally larger. The type is in abraded plumage with abnormally pale, faded under parts, while



idem, Orn. Pér., 1, p. 417, 1884—Auquimarca, Pumamarca, and Achamal, Peru; Sclater, Ibis, 1875, p. 208—part, Ecuador (vicinity of Quito) and Peru (Junín); Sclater, Cat. Bds. Brit. Mus., 11, p. 4, 1886—part, spec. h-l, "vicinity of Quito," Pallatanga, and "Jima," Ecuador; Allen, Bull. Amer. Mus. N. H., 2, p. 69, 1889—Quito (crit.); Salvin, Nov. Zool., 2, p. 4, 1895—Cajabamba and Succha (Huamachuco), Peru; Goodfellow, Ibis, 1901, p. 316—Papallacta and Pichincha, Ecuador; Berlepsch and Stolzmann, Ornith., 13, p. 76, 1906—Idma, Urubamba, Peru; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 80, 1922—Lloa, Calacali, Pomasqui, Tumbaco, Pichincha, and road to Nanegal, Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—Tumbaco, Ecuador.

*Diglossa sittoides sittoides* Chapman, Bull. U. S. Nat. Mus., 117, p. 114, 1921—Idma and San Miguel Bridge, Urubamba, Peru.

*Diglossa sittoides* (? *similis*) Hartert, Nov. Zool., 5, p. 480, 1898—Ibarra, Ecuador.

*Diglossa sittoides similis* (not of Lafresnaye) Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 84, 1911—Tumbaco, Ecuador.

*Range*.—Subtropical zone of Ecuador and Peru.

6: Peru (Cajamarca, 1; Chinchao, Dept. Huánuco, 4; Huachipa, Dept. Huánuco, 1).

### ***Diglossa baritula sittoides* (Lafresnaye and d'Orbigny). CINNAMON-BELLIED DIGLOSSA.**

*Serrirostrum sittoides* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 25, 1838—Yungas and Valle Grande, Bolivia (types in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 374, pl. 58, fig. 3 (male), 1847—Chupe (Yungas), Chuquisaca, and Valle Grande, Bolivia.

*Diglossa sittoides* Bridges, Proc. Zool. Soc. Lond., 15, p. 29, 1847—Ticquepaya, valley of Cochabamba, Bolivia; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 273—Bolivia (crit.); Sclater, Ibis, 1875, p. 208—part, Chichalula, Prov. Yungas, and other localities in Bolivia (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 596—Bolivia (d'Orbigny's localities); Sclater, Cat. Bds. Brit. Mus., 11, p. 4, 1886—part, spec. m, Yungas,

other specimens from the same general district (Cajabamba, Succha) are just as deeply colored underneath as typical *sittoides*. Birds from southern Peru (Idma, Matchu Picchu) approach the latter in coloration of forecrown, whereas those from Ecuador average slightly smaller.

#### **WING MEASUREMENTS OF ADULT MALES**

<i>D. b. sittoides</i>	
Seven from Bolivia	61, 61, 62, 62, 63, 64, 64
<i>D. b. decorata</i>	
Three from Urubamba, Peru	60, 61, 61
One from Chinchao, Huánuco, Peru	60
Four from Cajamarca and Cajabamba, Peru	59, 59, 59, 60
Four from western Ecuador	57, 57, 58, 58

*Material examined*.—Peru: Idma, Urubamba, 2; Matchu Picchu, San Miguel Bridge, Urubamba, 4; Chinchao, 4; Huachipa, 1; Cajamarca, 1; Cajabamba, 2; Succha, Huamachuco, 1; Santiago, 1.—Ecuador: Quito region, 6; Ibarra, 2.

Bolivia; Lillo, *Rev. Letr. Cienc. Soc.*, 3, p. 41, 1905—Cerro de Tafi Viejo, San Pablo, and La Cienaga, Tucumán; Dabbene, *Anal. Mus. Nac. Buenos Aires*, (3), 11, p. 370, 1910—same localities.

*Diglossa sittoides sittoides* Dinelli, *El Hornero*, 1, p. 62, 1918—Tucumán and Jujuy (habits).

*Diglossa glauca* (not of Sclater and Salvin, 1876) Sclater, *Cat. Bds. Brit. Mus.*, 11, p. 11, 1886—Bolivia (part, descr. of female).

**Range.**—Subtropical zone of Bolivia and northwestern Argentina (provinces of Jujuy and Tucumán).<sup>1</sup>

**\**Diglossa lafresnayii lafresnayii* (Boissonneau).<sup>2</sup> LAFRESNAYE'S DIGLOSSA.**

*Uncirostrum La Fresnayii* Boissonneau, *Rev. Zool.*, 3, No. 1, p. 4, Jan., 1840—Santa Fé de Bogotá, Colombia (part, descr. of adult male; location of type unknown).<sup>3</sup>

*Agrilorhinus bonapartei* Fraser, *Proc. Zool. Soc. Lond.*, 8, p. 22, July, 1840—Santa Fé de Bogotá, Colombia (type in Derby Collection, now in Liverpool Museum, examined); Bonaparte, *Atti Sest. Riun. Sci. Ital. Milano*, p. 404, 1845—Bogotá.

*Diglossa La Frenayii* (sic) Lesson, *Echo du Monde Sav.*, 11, No. 50, p. 1190, 1844—Colombia.

*Diglossa lafresnayii* (ei) Sclater, *Proc. Zool. Soc. Lond.*, 23, p. 138, 1855—Bogotá; idem, *Cat. Coll. Amer. Bds.*, p. 49, 1862—Bogotá; Cassin, *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 274—Bogotá and Pasto (crit.); Sclater, *Ibis*, 1875, p. 214—Colombia and Ecuador (monog.); Salvin, *Cat. Strickl. Coll.*, p. 174, 1882—Bogotá; Taczanowski and Berlepsch, *Proc. Zool. Soc. Lond.*, 1885, p. 75—San Rafael, Ecuador; Sclater, *Cat. Bds. Brit. Mus.*, 11, p. 7, 1886—Bogotá, San Lucas, and vicinity of Quito, Ecuador; Salvadori and Festa, *Boll. Mus. Zool. Torino*, 14, No. 357, p. 12, 1899—

<sup>1</sup> *Material examined.*—Bolivia: Yungas, 1; Chaco, Yungas of La Paz, 2; Apolobamba, 2; San Antonio, Yungas of La Paz, 1; Valle Grande, 1; Cochabamba, 1; Cerro Hosane, Dept. Santa Cruz, 1.—Argentina: Jujuy, 1.

<sup>2</sup> Characteristic of this species are the heavy, large bill, the light blue (burn blue) humeral patch, the absence of gray on the rump, and the peculiar metallic gloss of the pileum, which, by being confined to the apical portion of the feathers, produces a squamate effect.

Specimens from Ecuador and the central Andes of Colombia are perfectly identical with series from the Bogotá region and the adjoining section of Venezuela. The type of *A. bonapartei* Fraser belongs here, too.

*Material examined.*—Venezuela: Páramo de Rosas, Trujillo, 6; Cordillera of Mérida, Culata, 3; Valle, 1; Escorial, 1; Páramo de Tamá, Tachira, 2.—Colombia: eastern Andes, Bogotá, 5; Las Ventanas, Santander, 1; Ramirez, Santander, 2; central Andes, Almaguer, Cauca, 1; La Leonera, Caldas, 3.—Ecuador: west side of Pichincha, 1; above Nanegal, 5; near Quito, 2; unspecified, 1.

<sup>3</sup> Boissonneau's description, "plumage entièrement d'un noir profond, avec les petites tectrices alaires d'un gris cendré un peu bleuâtre," evidently refers to the large, blue-shouldered bird for which we have retained the specific term. The individuals of smaller size with grayish rump, considered by him to be "jeunes mâles," pertain to *D. carbonaria humeralis*, as is shown by two specimens in the Vienna Museum received from Boissonneau in 1841.

Nanegal and Frutillas, Ecuador; Goodfellow, Ibis, 1901, p. 317—Nanegal, around Quito, and western Andes, up to 10,000 ft., Ecuador; Ménégau, Miss. Serv. Géog. Arm. Mes. Arc Mérid. Equat., 9, p. B. 85, 1911—Pongo and Lloa, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 581, 1917—Almaguer, Laguneta, and Santa Isabel, central Andes, and Chipaque and Choachí, eastern Andes, Colombia; Lönnerberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—Lloa, Pichincha, Nono, Tumbaco, Rio Machangara, and Cumbaya, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 638, 1926—Verdecocha, Pichincha, Oyacachi, upper Sumaco, Ecuador, and Chaupe, northwestern Peru; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—Pilon, Ecuador.

*Diglossa lafresnayii lafresnayii* Zimmer, Auk, 46, p. 33, 1929 (range).

*Range*.—Temperate zone of extreme western Venezuela (Páramo de Rosas, State of Trujillo; Cordillera of Mérida); eastern and central Andes of Colombia; Ecuador; and extreme northwestern Peru (Chaupe, Dept. Piura).

6: Venezuela (Culata, Mérida, 1; Páramo de Tamá, Tachira, 2); Colombia (Bogotá, 3).

**\**Diglossa lafresnayii gloriosissima* Chapman.<sup>1</sup> WEST ANDEAN DIGLOSSA.**

*Diglossa gloriosissima* Chapman, Bull. Amer. Mus. N. H., 31, p. 165, 1912—Andes west of Popayán, Cauca, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 580, 1917—Andes west of Popayán and Paramillo, western Andes, Colombia.

*Diglossa carbonaria* (!) *gloriosissima* Stresemann, Orn. Monatsber., 34, p. 83, 1926 (crit.).

*Diglossa lafresnayii gloriosissima* Zimmer, Auk, 46, p. 33, 1929 (range).

*Range*.—Temperate zone of the western Andes of Colombia, from the Coast Range west of Popayán north to Paramillo, Antioquia.

1: Colombia (Coast Range west of Popayán, 1).

<sup>1</sup> *Diglossa lafresnayii gloriosissima* Chapman: Agrees with the typical form in size, large heavy bill, squamate gloss of pileum, faint metallic gloss of back, and extensive pale blue humeral patch; but differs by having the rump strongly suffused with slate gray and the under parts, excepting the black throat and foreneck, light rufous, between burnt sienna and Sanford's brown. Wing, (adult males) 71–75, (female) 68; tail, 63–66, (female) 64; bill, 13–14.

The characters of this form are most strongly developed in birds from Paramillo, near the northern end of the central Andes, while specimens from the Coast Range west of Popayán vary somewhat in the direction of *D. l. lafresnayii* by the blackish suffusion along the sides of the breast and abdomen. The rufous of the under parts, besides, is rather deeper, tending to chestnut. This interesting bird is by no means related to *D. carbonaria gloriosa*, to which it merely bears a superficial resemblance in the coloration of the under parts, these being, however, of a quite different, much paler and more yellowish red tone.

*Material examined*.—Colombia: Paramillo, Antioquia, 6; Coast Range west of Popayán, 4.

**\*Diglossa lafresnayii uncinata Hellmayr.<sup>1</sup> SINGLE-BANDED DIGLOSSA.**

*Diglossa pectoralis uncinata* Hellmayr, Nov. Zool., 12, p. 504, 1905—Levanto, Dept. Amazonas, Peru (type in Tring Museum, now in the American Museum of Natural History, New York); Zimmer, Auk, 46, p. 30, 1929 (crit.).

*Diglossa uncinata* Ménégau, Rev. Franç. d'Orn., 2, p. 9, 1911—Cumpang, northeast of Tayabamba, Dept. Libertad (spec. examined).

*Diglossa lafresnayii uncinata* Zimmer, Auk, 46, p. 33, 1929 (range).

**Range.**—Temperate zone of the central Cordillera of northern Peru, in depts. of Amazonas (Levanto, Chachapoyas, mountains east of Balsas) and Libertad (Cumpang, northeast of Tayabamba).

2: Peru (mountains east of Balsas, alt. 10,000 ft., 2).

**\*Diglossa lafresnayii pectoralis Cabanis.<sup>2</sup> WHITE-BANDED DIGLOSSA.**

*Diglossa pectoralis* Cabanis, Journ. Orn., 21, p. 318, 1873—Maraynioc, Dept. Junín, Peru (type in Berlin Museum); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Maraynioc; Slater, Ibis, 1875, p. 212, pl. 4—Maraynioc (crit.); Taczanowski, Orn. Pér., 1, p. 419, 1884—Maraynioc; Slater, Cat. Bds. Brit. Mus., 11, p. 6, 1886—Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—Maraynioc.

*Diglossa lafresnayii pectoralis* Zimmer, Auk, 46, p. 33, 1929 (range); idem, Field Mus. Nat. Hist., Zool. Ser., 17, p. 419, 1930—above Huánuco, Peru.

**Range.**—Temperate zone of central Peru, in depts. of Huánuco and Junín.

3: Peru (Huánuco Mountains, Dept. Huánuco, 3).

**Diglossa lafresnayii albilinea Chapman.<sup>3</sup> BUFF-MOUSTACHED DIGLOSSA.**

<sup>1</sup> *Diglossa lafresnayii uncinata* Hellmayr: Nearest to *D. l. pectoralis*, but distinguished by the absence of the gray humeral patch, rather deeper tawny anal region and under tail coverts, and especially by having the pectoral band uniform tawny, though slightly paler posteriorly. Wing, (adult males) 71–74, (female) 70; tail, 63–65, (female) 61; bill, 12–13.

**Material examined.**—Dept. Amazonas: Levanto, 3; Chachapoyas, 1; mountains east of Balsas, 2.—Dept. Libertad: Cumpang, 1.

<sup>2</sup> *Diglossa lafresnayii pectoralis* Cabanis differs from *D. l. albilinea* by smaller, darker gray humeral patch and more purely white malar stripe, and by having a broad, double (tawny and milky white) pectoral band. By the reduction of the gray humeral area it forms the transition to *D. l. uncinata*.

**Material examined.**—Dept. Huánuco: Huánuco Mountains, 3.—Dept. Junín: Maraynioc, 3.

<sup>3</sup> *Diglossa lafresnayii albilinea* Chapman: Differs from *D. l. mystacalis* merely by paler mystacial stripe, which, instead of being uniform deep ochraceous buff,

*Diglossa mystacalis albilinea* Chapman, Bull. Amer. Mus. N. H., 41, p. 331, 1919—Matchu Picchu, ruins of Cedrobamba, Peru (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 117, p. 114, 1921—Cedrobamba.

*Diglossa lafresnayii albilinea* Zimmer, Auk, 46, p. 33, 1929 (range).

**Range.**—Temperate zone of southeastern Peru, in depts. of Cuzco (Matchu Picchu) and Puno (Quispicanchio, Marcapata; Limbani, Carabaya).

***Diglossa lafresnayii mystacalis* Lafresnaye. MOUSTACHED DIGLOSSA.**

*Diglossa mystacalis* Lafresnaye, Rev. Zool., 9, p. 318, 1846—Bolivia<sup>1</sup> (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 394, 1930); Bridges, Proc. Zool. Soc. Lond., 15, p. 29, 1847—Yungas of La Paz, Bolivia; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 274—Bolivia; Sclater, Ibis, 1875, p. 212—Yungas of La Paz, Bolivia (crit.); idem and Salvin, Proc. Zool. Soc. Lond., 1879, p. 596—Cillutincara, Bolivia; Sclater, Cat. Bds. Brit. Mus., 11, p. 6, pl. 1, 1886—Bolivia.

*Diglossa lafresnayii mystacalis* Zimmer, Auk, 46, p. 33, 1929 (range).

**Range.**—Temperate zone of western Bolivia (Dept. La Paz).<sup>2</sup>

**\**Diglossa carbonaria gloriosa* Sclater and Salvin.<sup>3</sup> MÉRIDA DIGLOSSA.**

*Diglossa gloriosa* Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 784, pl. 46, fig. 1—Páramo de Culata, Mérida, Venezuela (type in British

is between light buff and warm buff, rarely darkening posteriorly into light ochraceous buff. Wing, (adult males) 73–74, (females) 70–71; tail, 60–63; bill, 14–15.

As far as the coloration of the mystacal stripe is concerned, this form connects *mystacalis* with the white-moustached *D. l. pectoralis*. The pale neutral gray humeral patch is just as extensive as in the Bolivian form. In one of the specimens the pectoral band, so characteristic of *D. l. pectoralis*, is suggested on the left side by a number of tawny edges to the lateral breast feathers.

**Material examined.**—Dept. Cuzco: Matchu Picchu, Cedrobamba, 4.—Dept. Puno: Quispicanchio, Marcapata (alt. 10,850 ft.), 3; Limbani, Carabaya (alt. 9,500 ft.), 1.

<sup>1</sup> The type was probably obtained by T. Bridges in the Yungas of La Paz (cf. Bridges, l.c., p. 29).

<sup>2</sup> **Material examined.**—Bolivia: Cillutincara, Dept. La Paz, 1; unspecified, 6 (including the type).

<sup>3</sup> *Diglossa carbonaria gloriosa* Sclater and Salvin: Agrees with *D. c. humeralis* in proportions, small slender bill, the faint silky gloss of the upper parts, and the pale gray humeral patch; but differs by slightly shorter wings, the possession of a distinct, though sometimes obsolete, pale gull gray superciliary streak, and chestnut breast, abdomen, and under tail coverts. Wing, (adult males) 63–67; tail, 55–60; bill, 10–11.

The grayish superciliary streak and the occasional presence of rufous in the malar region disclose the intimate relationship to *D. c. brunneiventris*.

**Material examined.**—Venezuela: Têta de Niquitao, Trujillo, 11; Cordillera of Mérida (Culata, Hechisera, Páramo de Santo Domingo, etc.), 15.

Museum); Sclater, Ibis, 1875, p. 210—Andes of Mérida (crit.); idem, Cat. Bds. Brit. Mus., 11, p. 5, 1886—Andes of Mérida.

*Diglossa carbonaria gloriosa* Stresemann, Orn. Monatsber., 34, p. 83, 1926 (crit.); Zimmer, Auk, 46, p. 29, 1929 (range).

**Range.**—Temperate zone of western Venezuela, in states of Trujillo (Têta de Niquitao) and Mérida (Cordillera of Mérida).

4: Venezuela, Mérida (Culata, 2; Hechisera, 2).

**\**Diglossa carbonaria nocticolor* Bangs.<sup>1</sup> SANTA MARTA DIGLOSSA.**

*Diglossa nocticolor* Bangs, Proc. Biol. Soc. Wash., 12, p. 180, 1898—Macotama, Santa Marta Mountains, Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 394, 1930); Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—El Libano; Todd and Carriker, Ann. Carnegie Mus., 14, p. 464, 1922—San Lorenzo, Sierra Nevada de Santa Marta, San Miguel, Cerro de Caracas, Macotama, Páramo de Mamarongo, Páramo de Chiriqua, and Heights of Chirua (crit., habits).

*Diglossa carbonaria nocticolor* Zimmer, Auk, 46, p. 29, 1929 (range).

*Diglossa aterrima* (not of Lafresnaye) Salvin and Godman, Ibis, 1880, p. 119—Sierra Nevada de Santa Marta (spec. examined); Sclater, Cat. Bds. Brit. Mus., 11, p. 8, 1886—part, spec. a-d, Sierra Nevada de Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900 (ex Salvin and Godman).

**Range.**—Temperate zone of the Santa Marta Mountains, Colombia.

2: Colombia (San Lorenzo, Santa Marta, 2).

**\**Diglossa carbonaria humeralis* (Fraser).<sup>2</sup> GRAY-SHOULDERED DIGLOSSA.**

<sup>1</sup> *Diglossa carbonaria nocticolor* Bangs: Closely allied to *D. c. humeralis*, but slightly larger and without the gull gray humeral patch. Wing, (males) 73–76, (female) 67–69; tail, 65–68, (female) 58–62; bill, 11.

By the black smaller upper wing coverts, which show very rarely faint suggestions of grayish edges, the Santa Marta *Diglossa* approaches *D. c. aterrima*, but differs readily by the extensive slate gray uropygial area. The specimens obtained by Simons in the Sierra Nevada de Santa Marta prove, on reexamination, to be referable to the present form.

**Material examined.**—Santa Marta Mountains, Colombia: San Lorenzo, 8; Macotama, 2; Sierra Nevada de Santa Marta, 4.

<sup>2</sup> *Diglossa carbonaria humeralis* (Fraser), in spite of its superficial resemblance, is quite distinct specifically from *D. l. lafresnayi*, both being found in the Temperate zone of the eastern Andes of Colombia. It differs from the latter bird by smaller size, much slenderer weaker bill, fainter (more silky) gloss of the pileum, extensively slate gray uropygial area, and pale gray (instead of decidedly blue) humeral patch. The difference in the bulk of the bill is particularly noticeable, when viewed from below. The gloss of the body plumage is more evenly distributed over the feathers, and does not produce any squamate effect on the pileum, while the back has a silky rather than metallic sheen. The humeral patch, which is less extended, varies in tone between deep gull gray and gull gray, passing into light gull gray towards the bend of the wing. The rump is largely dark gull gray

*Agriolorhinus humeralis* Fraser, Proc. Zool. Soc. Lond., 8, p. 22, July, 1840—Santa Fé de Bogotá, Colombia (type in Derby Collection, now in Liverpool Museum, examined); Bonaparte, Atti Sest. Riun. Sci. Ital. Milano, p. 404, 1845—Bogotá (crit.).

*Diglossa intermedia* Cabanis, Mus. Hein., 1, p. 97 (note), 1851—no locality indicated (type from "New Granada" in Berlin Museum examined).

*Uncirostrum La Fresnayii* Boissonneau, Rev. Zool., 3, p. 4, 1840—Santa Fé de Bogotá, Colombia (part, descr. of "jeune mâle").<sup>1</sup>

*Diglossa humeralis* Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 49, 1862—"Ecuador" and "Bogotá"; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 275—"Venezuela" (crit.); Wyatt, Ibis, 1871, p. 324—high regions [of Santander, near Ocaña]; Sclater, Ibis, 1875, p. 215—Colombia (Ocaña, Bogotá) and "Ecuador" (crit.); Salvin, Cat. Strickl. Coll., p. 175, 1882—Bogotá; Sclater, Cat. Bds. Brit. Mus., 11, p. 8, 1886—Colombia (Bogotá, Pamplona) and "Ecuador"; Chapman, Bull. Amer. Mus. N. H., 36, p. 581, 1917—Chipaqué, Subia, La Mar, Palo Hueco, and La Pradera, eastern Andes, Colombia.

*Diglossa aterrima* (not of Lafresnaye) Chapman, Bull. Amer. Mus. N. H., 36, p. 581, 1917—part, Chipaque, eastern Andes, Colombia (spec. examined).

*Diglossa carbonaria humeralis* Stresemann, Orn. Monatsber., 34, p. 83, 1926 (crit.); Zimmer, Auk, 46, p. 29, 1929 (range).

**Range.**—Temperate zone of the eastern Andes of Colombia and the adjacent section of extreme western Venezuela (Páramo de Tamá, Tachira).<sup>2</sup>

7: Colombia (Bogotá, 2; La Pradera, Cundinamarca, 1; Palo Hueco, Cundinamarca, 1); Venezuela (Páramo de Tamá, Tachira, 3).

**\**Diglossa carbonaria aterrima* Lafresnaye.<sup>3</sup> BLACK DIGLOSSA.**

or slate gray, and the black upper tail coverts are laterally edged with grayish. There is never a trace of a gray superciliary streak. The types of *A. humeralis* and *D. intermedia*, which we have carefully compared, are both typical of the present form. A male from Chipaque, eastern Andes, listed by Chapman as *D. aterrima* proves, on reexamination, to be an immature bird of *humeralis*; witness the pale gray lesser upper wing coverts.

Wing, (adult male) 63–71, (female) 64–67; tail, 58–64, (female) 56–59; bill, 10–11.

**Material examined.**—Venezuela: Páramo de Tamá, Tachira, 3.—Colombia, eastern Andes: La Pica, Santander, 2; Ramirez, Santander, 10; Las Ventanas, Santander, 3; Lagunillas, Boyacá, 1; "Bogotá," 8; Chipaque, 1; La Pradera, Cundinamarca, 1; Palo Hueco, 1.

<sup>1</sup> Two specimens in the Vienna Museum received in 1841 from Boissonneau show his "young males" to belong to *D. c. humeralis*, thus confirming Cabanis's suspicions.

<sup>2</sup> Sclater's record from "Ecuador" is untrustworthy. It was based on a dealer's skin, obtained from Dillwyn, without original label or definite locality.

<sup>3</sup> *Diglossa carbonaria aterrima* Lafresnaye: Nearest to *D. c. nocticolor* and like it without gray humeral patch, but smaller and lacking the slate gray uropygial area. Wing, (male) 67–70; tail, 55–61; bill, 10–11.

Immature birds from the central Andes of Colombia appear to be inseparable from Ecuadorian specimens in corresponding plumage, though they have a few

*Diglossa aterrima* Lafresnaye, Rev. Zool., 9, p. 319, 1846—"in Nova Granada, Pasto" (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 394, 1930); Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Pasto (ex Lafresnaye); idem, l.c., 27, p. 440, 1859—"Rio Napo"; idem, l.c., 28, p. 76, 1859—Panza, Ecuador; idem, l.c., 28, p. 85, 1859—Calacali, Ecuador; idem, Cat. Coll. Amer. Bds., p. 49, 1862—Titlacun; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 275—"New Grenada" (crit.); Sclater, Ibis, 1875, p. 216—Andes of Ecuador (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 224—Tambillo, Peru; idem, l.c., 1880, p. 193—Cutervo, Peru; idem, Orn. Pér., 1, p. 419, 1884—Tambillo and Cutervo; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287—Cechce, Ecuador; Sclater, Cat. Bds. Brit. Mus., 11, p. 8, 1886—part, spec. f-l, Ecuador and Peru; Hartert, Nov. Zool., 5, p. 480, 1898—Mount Cayambe, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 11, 1899—El Troje (Huaca), Lloa (Pichincha), and Papallacta, Ecuador; Goodfellow, Ibis, 1901, p. 317—neighborhood of Quito (nest and eggs descr.); Ménégau, Miss. Serv. Géog. Arm. Mes. Arc. Mérid. Equat., 9, p. B. 85, 1911—Guápulo and Lloa, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 581, 1917—part, Almaguer, Laguneta, and Santa Isabel, central Andes, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—Lloa, Calacali, Tumbaco, Rio Machangara, and Quito, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 638, 1926—Yanacocha, Guápulo, Lloa, Pichincha, Chimborazo, Urbina, El Chiral, Bestion, El Paso, San Bartolo, Salvias, Taraguacocha, Loja, and Oyacachi, Ecuador, and El Tambo, Peru; Berlioz, Bull. Mus. Hist. Nat. Paris, 34, p. 74, 1928—Tumbaco, Cerro Mojanda, and Huila, Ecuador.

*Diglossa carbonaria aterrima* Zimmer, Auk, 46, p. 29, 1929 (range).

**Range.**—Temperate zone of the central Andes of Colombia (north to Quindiu), of the Andes of Ecuador, and northwestern Peru (Cutervo, Tambillo, El Tambo).

1: Ecuador (unspecified, 1).

**\**Diglossa carbonaria brunneiventris* Lafresnaye.<sup>1</sup> BLACK-THROATED DIGLOSSA.**

obsolete grayish fringes to some of the outer lesser wing coverts. Birds from El Tambo, Peru, are identical with the Ecuadorian ones.

**Material examined.**—Colombia, central Andes: Laguneta, 2; Santa Isabel, 1; Almaguer, 2.—Ecuador: Chillo, 1; Pichincha, 2; Yanacocha, 1; Urbina, Chimborazo, 1; El Paso, Prov. del Azuay, 1; Taraguacocha, Prov. del Oro, 2; El Chiral, 1; Loja, 1.—Peru: El Tambo, Dept. Piura, 5.

<sup>1</sup> *Diglossa carbonaria brunneiventris* Lafresnaye is the most strongly marked member of the group by reason of its rufous malar stripe and under parts, only the throat being black and the sides of the body pale gray.

Distribution and relationship have been fully discussed by Mr. Zimmer (Auk, 46, pp. 24–28, 1929). It is generally diffused over Peru and extends into extreme northwestern Bolivia, where it intergrades with *D. c. carbonaria*; whereas intergradation with *D. c. aterrima*, whose distributional area it closely approaches or possibly even overlaps in certain parts of northwestern Peru, does not seem



*Diglossa brunneiventris* Lafresnaye, Rev. Zool., 9, p. 318, 1846—"in Peruvia" (type in Paris Museum examined); Des Murs, Icon. Orn., livr. 8, pl. 43, 1847—"Chile" (figure of type); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 274—Bolivia (crit.); Sclater, Proc. Zool. Soc. Lond., 1867, p. 322 (occurrence in Chile denied); Sclater and Salvin, l.c., 1867, p. 984; l.c., 1868, p. 596—Chihuahua, Arequipa; Sclater, l.c., 1873, p. 780—Paucartambo, Peru; Taczanowski, l.c., 1874, p. 511—Maraynioc, Peru; Sclater, Ibis, 1875, p. 211—Peru (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 225—Chota, northwestern Peru (spec. examined); Sclater and Salvin, l.c., 1879, p. 496—Santa Elena, Colombia; idem, l.c., 1879, p. 596—"Tilotilo" and Khapaguaia, Bolivia (spec. examined); Taczanowski, l.c., 1882, p. 8—Tamiapampa, Peru; idem, Orn. Pér., 1, p. 420, 1884—Tarma, Pumamarca, Maraynioc, Paucal, Chota, "Cutervo" (errore), Tamiapampa, Chachapoyas, and Paucartambo, Peru; Sclater, Cat. Bds. Brit. Mus., 11, p. 5, 1886—Bolivia (Khapaguaia, "Simacu"), Peru (Tinta, Paucartambo, "Cosnipata," Pumamarca), and Colombia (Santa Elena); Salvin, Nov. Zool., 2, p. 4, 1895—Cajamarca, Cajabamba, and Huamachuco, Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—Palcomayo, Acobamba, Maraynioc, and Tarma, Peru; Ménégaux, Rev. Franç. d'Orn., 2, p. 9, 1911—Algamarca, Peru; Piguet, Mém. Soc. Neuchât. Sci. Nat., 5, p. 809, 1914—Angelopolis, near Medellín, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 580, 1917—Paramillo, western Andes, Colombia; idem, Bull. U. S. Nat. Mus., 117, p. 114, 1921—Cuzco, Ttica-Ttica, Ollantaytambo, and Torontoy, Peru; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 11, 1920—Ollachea, Sierra of Carabaya, Peru.

*Diglossa carbonaria brunneiventris* Zimmer, Auk, 46, p. 29, 1929 (range); idem, Field Mus. Nat. Hist., Zool. Ser., 17, p. 418, 1930—La Quinua, near Huánuco, Pano, and Cullcui, Rio Marañón, Dept. Huánuco, Peru; Hellmayr, l.c., 19, p. 49, 1932 (crit. note on reported occurrence in Chile).

*Range*.—Temperate zone of Peru, excepting the extreme northwestern section, and the adjacent districts of northwestern Bolivia (Sorata, Khapaguaia); an isolated colony at the northern end of the western Andes in Antioquia, Colombia.

17: Peru (mountains east of Balsas, 1; Cullcui, Marañón River, 1; Pano Mountains, 1; Huánuco Mountains, 9; La Quinua, 2; Limbani, Carabaya, 2); Colombia (Paramillo, western Andes, 1).

to take place. Specimens from the northern end of the west Colombian Andes, though slightly smaller, I am unable to properly distinguish in spite of their isolated habitat. The locality "Chile," assigned to the type, is probably erroneous.

*Additional material examined*.—Colombia, western Andes: Paramillo, 6; Santa Elena, 2.—Peru: Chota, 1; Baños, near Cajamarca, 2; San Marcos, Libertad, 1; Leimabamba, 2; Torontoy, 1; Ollantaytambo, 1; Ollachea, 5; Caradoc, Marcapata, 1; Limbani, Carabaya, 4.—Bolivia: "Khapaguaia," 3; Sorata, 1.—"Chile," 1 (the type).

**\**Diglossa carbonaria carbonaria* (Lafresnaye and d'Orbigny).<sup>1</sup>  
BOLIVIAN DIGLOSSA.**

*Serrirostrum carbonarium* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 25, 1838—Sicasica and Ayupaya, Bolivia (type from Sicasica, Dept. La Paz, in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 373, pl. 58, fig. 1, 1847—Cajapi (Prov. Yungas), Inquisivi (Prov. Sicasica), and Palca (Prov. Ayupaya), Bolivia.

*Diglossa carbonaria* Bridges, Proc. Zool. Soc. Lond., 15, p. 29, 1847—Ticquepaya, valley of Cochabamba; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 273—Bolivia (crit.); Sclater, Ibis, 1875, p. 213—Bolivia (crit.); idem and Salvin, Proc. Zool. Soc. Lond., 1879, p. 596—"Tilotilo," Bolivia; Sclater, Cat. Bds. Brit. Mus., 11, p. 6, 1886—Bolivia.

*Diglossa carbonaria carbonaria* Stresemann, Orn. Monatsber., 34, p. 83, 1926—Bolivia, "Peru and Ecuador" (error); Zimmer, Auk, 46, pp. 26-29, 1929—Bolivia (variation, range).

**Range.**—Temperate zone of Bolivia, in depts. of La Paz, Cochabamba, and Chuquisaca.

1: Bolivia (Iquico, Dept. La Paz, 1).

**\**Diglossa venezuelensis* Chapman.<sup>2</sup> VENEZUELAN DIGLOSSA.**

*Diglossa venezuelensis* Chapman, Amer. Mus. Nov., 191, p. 11, 1925—Carapas, Sucre, Venezuela (type in the American Museum of Natural History, New York).

<sup>1</sup> Specimens with rufous in the malar region and in the middle of the belly, which Berlepsch (Verh. Internat. Zool. Congr. Berlin, p. 550, 1902) regarded as hybrids between *carbonaria* and *brunneiventris*, are clearly intergrades, as set forth by Mr. Zimmer.

In addition to fifteen specimens obtained by G. Garlepp at various localities in Dept. La Paz (La Paz; Sandillani; Iquico, a farm on the slope of Illimani; Cocapata; San Cristobal), we have examined two from Sicasica (the types) in the Paris Museum, and five from Cochabamba (Cochabamba and Incachaca) in the Carnegie Museum.

<sup>2</sup> *Diglossa venezuelensis* Chapman: Male similar to *D. albilatera* in having axillars, under wing coverts, and lateral breast feathers snowy white, but general coloration coal black instead of blackish slate. Female very differently colored; upper part and sides of the head dull olive citrine, brighter (more Roman green) on the forehead; back deep mouse gray, the feathers centered with dusky and edged with dull olivaceous; rump and upper tail coverts washed with brownish olive; smaller upper wing coverts deep neutral gray, the larger ones fuscous with narrow dull brownish olive margins; remiges and rectrices fuscous black, exteriorly edged with grayish or brownish; malar region brighter than the head, nearly dark olive buff; under surface dingy gray, lower throat and upper chest washed with buffy brown or dull isabella color, flanks and lower tail coverts slightly tinged with brownish; axillars, under wing coverts, and lateral pectoral feathers white as in the male. Wing, 70, (female) 63-65; tail, 58, (female) 54-57; bill, 12.

A very distinct form, which may ultimately prove to be conspecific with *D. albilatera*. The much larger size, the black plumage of the male, and the very peculiar coloration of the female render it, however, easily recognizable.

**Material examined.**—Venezuela, Sucre: Carapas, 2; Los dos Rios, 1.

*Range*.—Subtropical zone of northeastern Venezuela, in state of Sucre (Mount Turumiquire).

18: Venezuela (Mount Turumiquire, Sucre, 18).

***Diglossa albilatera federalis* Hellmayr.<sup>1</sup> CARACAS WHITE-SIDED DIGLOSSA.**

*Diglossa albilatera federalis* Hellmayr, Anz. Orn. Ges. Bay., 1, No. 6, p. 45, June, 1922—Silla de Caracas, Venezuela (type in Munich Museum); idem, Arch. Naturg., 90, A, Heft 2, p. 166, 1924—Silla de Caracas and Galipán, Cerro del Avila, Venezuela.

*Diglossa albilateralis* (not *Diglossa albilatera* Lafresnaye) Sclater, Cat. Bds. Brit. Mus., 11, p. 9, 1886—part, spec. a-c, Aragua, Venezuela.

*Range*.—North coast mountains of Venezuela in the vicinity of Caracas (Silla de Caracas; Galipán, Cerro del Avila) and in State of Aragua.

**\**Diglossa albilatera albilatera* Lafresnaye. WHITE-SIDED DIGLOSSA.**

*Diglossa albi-latera* Lafresnaye, Rev. Zool., 6, p. 99, 1843—"Colombie"—Santa Fé de Bogotá (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 395, 1930); idem, l.c., 9, p. 317, 1846—Colombia.

*Diglossa albilateralis* Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; idem, l.c., 27, p. 138, 1859—Pallatanga, Ecuador; idem, l.c., 28, p. 65, 1860—Puellarro and above Puellarro, Ecuador; idem, Cat. Coll. Amer. Bds., p. 48, 1862—Pallatanga and Puellarro; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 275—Bogotá (crit., descr. male and female); Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—Mérida, Venezuela; Wyatt, Ibis, 1871, p. 324—Herradura and Canuto, eastern Andes, Colombia; Sclater, Ibis, 1875, p. 216, pl. 5, figs. 1, 2 (male, female)—Andes of Venezuela, Colombia, and Ecuador (monog.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Retiro, Medellín, and Santa Elena, Colombia (eggs descr.); Salvin and Godman, Ibis, 1880, p. 119—near San Sebastian, Colombia; Salvin, Cat. Strickl. Coll., p. 175, 1882—Bogotá; Berlepsch, Journ. Orn., 32, p. 285, 1884—Bucaramanga; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287—Cayandeled, Cechce, and Chaguarpata, Ecuador; idem, l.c., 1885, p. 75—Baños, Ecuador; Sclater, Cat. Bds. Brit. Mus., 11, p. 9, 1886—part, spec. d-a, Bogotá, Antioquia, Retiro, Santa Elena, San Sebastian, "Jima," Pallatanga,

<sup>1</sup> *Diglossa albilatera federalis* Hellmayr: Very similar to *D. a. albilatera*, but general coloration of males paler and more bluish, slate color rather than blackish slate, and under tail coverts more or less distinctly edged with white; females above paler, buffy olive rather than light brownish olive, with the throat and chest lighter, isabella color instead of tawny olive, and the abdomen much paler, buffy rather than brownish. Wing, 60–62, (female) 55–58; tail, 49–52; bill, 10–11.

*Material examined*.—Venezuela: Silla de Caracas, 5; Galipán, Cerro del Avila, 12.

Puellaro, Colombia and Ecuador; Bangs, Proc. Biol. Soc. Wash., 12, p. 179, 1898—San Miguel, Santa Marta; idem, Proc. New Engl. Zool. Cl., 1, p. 80, 1899—San Sebastian and El Mamón; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Niebli, Ecuador; Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—El Libano and Las Nubes, Colombia; Goodfellow, Ibis, 1901, p. 316—Papallacta and Pichincha, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 85, 1911—"Quito," Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 581, 1917—Paramillo Trail, San Antonio, Cerro Munchique, Gallera, Andes west of Popayán, Almaguer, Miraflores, Salento, Laguneta, Santa Elena, Barro Blanco, Rio Toché, El Eden, Aguadita, El Roble, El Piñon, and Buena Vista, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—road to Nanegal and Mindo, Ecuador; Todd and Carriker, Ann. Carnegie Mus., 14, p. 465, 1922—San Miguel, Cerro de Caracas, San Lorenzo, Taquina, Sierra Nevada de Santa Marta, Heights of Chirua, La Concepción, and Páramo de Macotama, Colombia.

*Diglossa albilatera* Chapman, Bull. Amer. Mus. N. H., 55, p. 639, 1926—junction of Chanchan and Chiguancay, Huigra, Chunchi, above Baeza, and below Papallacta, Ecuador.

*Range*.—Subtropical zone of extreme western Venezuela (Cordillera of Mérida), Colombia, and Ecuador, excepting the extreme southwestern section.<sup>1</sup>

6: Colombia (Gallera, 1; El Roble, 1; Bogotá, 4).

### ***Diglossa albilatera schistacea* Chapman.<sup>2</sup> PERUVIAN WHITE-SIDED DIGLOSSA.**

*Diglossa albilatera schistacea* Chapman, Amer. Mus. Nov., 160, p. 7, 1925—Chaupe, northeast of Huancabamba, Peru (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 639, 1926—San Bartolo, Ecuador, and Chaupe, Peru.

(?) *Diglossa albilateralis* (not *Diglossa albilatera* Lafresnaye?) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 224—Tambillo; idem, l.c., 1880, p. 193—Cutervo; idem, Orn. Pér., 1, p. 418, 1884—Tambillo and Cutervo, Peru.

<sup>1</sup> Birds from the Mérida region agree perfectly with "Bogotá" skins. Adult males from western Ecuador (Pichincha, Chaguarpata, Cayandedel) appear to me inseparable, being more blackish, both above and below, than specimens of *D. a. schistacea* from Chaupe and Chugur. No material is available from the Santa Marta Mountains. According to Chapman, the race of that region is typical *albilatera*.

*Additional material examined*.—Colombia: "Bogotá," 24.—Venezuela, Cordillera of Mérida: La Culata, 1; Mérida, 4; Sierra, 2.—Ecuador: Pichincha, 2; Chaguarpata, 1; Cayandedel, 2.

<sup>2</sup> *Diglossa albilatera schistacea* Chapman: Similar in the male sex to *D. a. federalis*, but under parts, especially posteriorly, still paler slate color and without white edges to the under tail coverts; female much darker throughout and obviously not distinguishable from that of *D. a. albilatera*.

An adult male from Chaupe (type locality) and another in first annual plumage from Chugur (Pacific slope fifty miles northwest of Cajamarca) are, as pointed out by Chapman, exceedingly similar to *D. a. federalis*, being decidedly paler, more

*Range*.—Subtropical zone of northern Peru and extreme southwestern Ecuador (San Bartolo).

**Diglossa duidae** Chapman.<sup>1</sup> DUIDA DIGLOSSA.

*Diglossa duidae* Chapman, Amer. Mus. Nov., 380, p. 26, 1929—Mount Duida, Venezuela (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 63, p. 123, 1931—Agüita, Savanna Hills, Central Camp, Desfiladero, etc., Mount Duida (crit.).

*Range*.—Subtropical zone of Mount Duida, southern Venezuela.

**\*Diglossa major** Cabanis. RORAIMA DIGLOSSA.

*Diglossa major* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 676, "1848" [=1849]—Roraima, British Guiana (type in Berlin Museum); Slater, Ibis, 1875, p. 214—Roraima (crit.); Salvin, Ibis, 1885, p. 206—Roraima; Slater, Cat. Bds. Brit. Mus., 11, p. 7, 1886—Roraima; Chubb, Bds. Brit. Guiana, 2, p. 475, pl. 8, fig. 3, 1921—Roraima; Chapman, Bull. Amer. Mus. N. H., 63, p. 123, 1931—Philipp Camp, Rondon Camp, and Summit, Mount Roraima.

*Range*.—Subtropical zone of Mount Roraima, on the confines of British Guiana and Venezuela.<sup>2</sup>

1: British Guiana (Mount Roraima, 1).

slate color, less blackish than a series of typical *albilatera*, but agree in dimensions. Six males from Chachapoyas are conspicuously larger and much darker, some being even more blackish than *D. a. albilatera*. A single male from Tambillo, in the same region as Chaupe, is equally large, and, although its worn condition forbids final judgment, it more nearly resembles the Chachapoyas birds in coloration. More material from northern Peru is required to explain this seemingly somewhat erratic variation.

MEASUREMENTS

	Wing	Tail
One adult male from Chaupe.....	60	45
One male (first annual) from Chugur.....	59	46
One adult male from Tambillo.....	65	53
Five adult males from Chachapoyas.....	63, 63, 65, 65, 65	54, 54, 56, 56, 56
One male (first annual) from Chachapoyas.....	60	52

<sup>1</sup> *Diglossa duidae* Chapman: Upper part of the head black, crown feathers with the edges slightly glossy, passing into slate color on the back and tail coverts; tail and wings blackish, narrowly edged with slate color; median and greater wing coverts usually fringed with slate color; lesser wing coverts somewhat paler (slate gray) than the back, without forming a distinct humeral area; sides of the head and chin sooty black; throat and chest slate color, passing into slate gray on the sides and flanks; the feathers in the middle of the breast and abdomen centered with pale neutral gray, producing an indistinct light spotting; under tail coverts slate gray, margined with whitish; axillaries and under wing coverts light neutral gray; bill black, brownish horn color at base of lower mandible; feet dark brown. Wing, (male) 72–75, (female) 68–72; tail, 57–60, (female) 56–58; bill, 12–13.

This very distinct species is more nearly related to *D. major* than to any other, but differs immediately by smaller size, blackish (instead of dull rufous) sides of the head, slate gray white-edged (instead of chestnut) lower tail coverts, and the absence of the bluish slate gray shaft streaks on pileum and back.

*Material examined*.—Venezuela: Mount Duida, 6.

<sup>2</sup> *Material examined*.—British Guiana: Roraima, 10.

**Diglossa indigotica** Sclater.<sup>1</sup> INDIGO DIGLOSSA.

*Diglossa indigotica* Sclater, Ann. Mag. Nat. Hist., (2), 17, p. 467, 1856—"in republica Equatoriana" (type in coll. of P. L. Sclater, now in British Museum, examined); idem, Proc. Zool. Soc. Lond., 28, p. 85, 1860—Nanegal, Ecuador (spec. examined); idem, Cat. Coll. Amer. Bds., p. 49, pl. 6, 1862—Nanegal, Ecuador; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 274—Ecuador (crit.); Sclater, Ibis, 1875, p. 218—Nanegal, Ecuador (crit.); idem, Cat. Bds. Brit. Mus., 11, p. 10, 1886—foot of Pichincha and Nanegal, Ecuador; Goodfellow, Ibis, 1901, p. 318—below Canzacota, Ecuador; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—road to Nanegal; Hellmayr, Nov. Zool., 35, p. 267, 1930—western Ecuador and western Andes, Colombia (crit.).

*Diglossa cryptorhis* Chapman, Bull. Amer. Mus. N. H., 31, p. 164, 1912—Gallera, Andes west of Popayán, Colombia (type in the American Museum of Natural History, New York, examined); idem, l.c., 36, p. 582, 1917—Gallera and trail between Nóvita and Cartago, western Andes, Colombia.

*Range*.—Subtropical zone of western Ecuador and of the western Andes of Colombia (Gallera and Nóvita Trail).

**Diglossa glauca glauca** Sclater and Salvin.<sup>2</sup> GLAUCOUS DIGLOSSA.

<sup>1</sup> *Diglossa indigotica* Sclater, while related to *D. glauca*, is quite distinct by reason of the firmer texture of its plumage, more concealed nostrils, relatively shorter tail, absence of the black forehead, and much brighter, more glossy coloration, which is cyanine blue or Prussian blue, while the edges to the wing and tail feathers, instead of being uniform in tone with the back as in *D. glauca*, are distinctly greenish blue (blackish green blue to marine blue). The female is much duller, the general coloration being about the same shade as the wing edges of the males; the margins to the flight quills are narrower and duller greenish blue, and the abdomen is suffused with dusky gray. Wing, (adult males) 58–65, (female) 57; tail, 37–44; bill, 10½–12.

Comparison of a series of skins from western and eastern Ecuador in the British Museum showed the type of *D. indigotica* to be a specimen of the Pacific form, which Chapman had described as *D. cryptorhis*. Two examples from the western Andes of Colombia seem to be inseparable from those of western Ecuador, although the male from Nóvita Trail is a faint shade less purplish above than any other bird in the series.

*Material examined*.—Colombia, western Andes: Nóvita Trail, 1; Gallera, 1.—Western Ecuador: Nanegal, 1; foot of Pichincha, 1; Mindo, 5; Rio Blanco, below Mindo, 1; above Gualea, 1; Paramba (alt. 3,500 ft.), Prov. Imbabura, 1; unspecified, 1 (the type).

<sup>2</sup> *Diglossa glauca glauca* Sclater and Salvin: General color bright purplish blue, nearest to dusky blue with, however, a slight dark dull violet blue hue; edges to upper wing coverts and inner remiges very nearly the same as the back, those of the primaries hardly different from dark dull violet blue; loreal region and a distinct, though narrow, frontal band black. Wing, (adult male) 64–66, (female) 60–62; tail, 45–51, (female) 44–47; bill, 11.

The type is an immature bird with yellow basal half of the lower mandible and retaining, both above and below, a good deal of the sooty juvenile plumage, between which the new purplish blue feathers of the adult livery are just appearing. An adult collected by O. Garlepp at Songo, Yungas of La Paz, thus nearly topotypical, agrees precisely with a series from Santo Domingo (*D. g. incae*).

*Material examined*.—Bolivia, Yungas of La Paz: Nairapi, 1 (the type); Songo, 1.—Peru: Santo Domingo, Carabaya, 6; Rio Inambari, Dept. Puno, 1; Marcapata, Dept. Cuzco, 1; Perené, Dept. Junín, 1.

*Diglossa glauca* Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 253—Nairapi, Bolivia (type in British Museum examined); idem, l.c., 1879, p. 596—Nairapi; Sclater, Cat. Bds. Brit. Mus., 11, p. 11, 1886—part, Nairapi;<sup>1</sup> Berlepsch and Stolzmann, Ornith., 13, p. 107, 1906—Huaynapata and Rio Cadena, Marcapata, Peru (crit.).

*Diglossa indigotica inca* Chapman, Amer. Mus. Nov., 160, p. 8, 1925—Inca Mine, Santo Domingo, Peru (type in the American Museum of Natural History, New York).

*Diglossa indigotica* (not of Sclater) Chapman, Bull. U. S. Nat. Mus., 117, p. 115, 1921—Rio San Miguel, Urubamba, Peru.

*Diglossa glauca glauca* Hellmayr, Nov. Zool., 35, pp. 266, 267, 1930—southern Peru and northwestern Bolivia (crit.).

*Range*.—Tropical and Lower Subtropical zone of southern Peru (north to Junín) and of the adjoining section of Bolivia (Nairapi and Songo, Yungas of La Paz).

### ***Diglossa glauca tyrianthina* Hellmayr.<sup>2</sup> TYRIAN BLUE DIGLOSSA.**

*Diglossa glauca tyrianthina* Hellmayr, Nov. Zool., 35, p. 266, 1930—lower Sumaco, eastern Ecuador (type in the American Museum of Natural History, New York).

*Diglossa indigotica* (not of Sclater) Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 75—Mapoto, eastern Ecuador.

*Diglossa indigotica indigotica* Chapman, Bull. Amer. Mus. N. H., 55, p. 640, 1926—Macas region, lower Sumaco, and below Oyacachi, eastern Ecuador.

*Range*.—Tropical and Lower Subtropical zone of eastern Ecuador (Mapoto; lower Sumaco; below Oyacachi; Macas region).

### ***Diglossa caerulescens caerulescens* (Sclater). BLUIISH DIGLOSSA.**

*Diglossopsis*<sup>3</sup> *caerulescens* Sclater, Ann. Mag. Nat. Hist., (2), 17, p. 467, 1856—"in vic. urbis Caraccas in Venezuela" (cotypes in Bremen and Paris museums); Sclater, Cat. Coll. Amer. Bds., p. 49, 1862—part, spec. a, Caracas; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 627—Caracas; Sclater, Ibis, 1875, p. 219—part, Caracas; idem, Cat. Bds. Brit. Mus., 11, p. 11, 1886—part, spec. a-c, Caracas.<sup>4</sup>

<sup>1</sup> The alleged female refers to *D. baritula sitoides* (Lafr. & d'Orb.), the description being faulty with respect to the under parts, which are by no means "ochraceous," but dingy yellowish obsoletely streaked anteriorly.

<sup>2</sup> *Diglossa glauca tyrianthina* Hellmayr: Similar to *D. g. glauca* in texture of plumage and partly exposed nostrils, but wings rather shorter, coloration duller (less violaceous), varying from Tyrian blue to indigo blue, and black frontal band distinctly wider (from three to four millimeters broad). Wing, 61, (female) 57; tail, 41-46; bill, 11.

*Material examined*.—Eastern Ecuador: below Chaco, Rio Oyacachi, 2; lower Sumaco, 3.

<sup>3</sup> I fully concur with Mr. Zimmer's view (Field Mus. Nat. Hist., Zool. Ser., 17, pp. 420-421, 1930) that the genus *Diglossopsis* is untenable. Cf. also Berlepsch, Journ. Orn., 32, p. 286, 1884.

<sup>4</sup> Specimen "a" is erroneously listed as "the type."

*Diglossopsis caerulescens caerulescens* Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 168, 1924—Galipán, Cerro del Avila, and Silla de Caracas, Venezuela (crit.).

*Range*.—Subtropical zone of the Coast Ranges of Venezuela (Silla de Caracas and Cerro del Avila).<sup>1</sup>

**\*Diglossa caerulescens saturata (Todd).<sup>2</sup> COLOMBIAN BLUISH DIGLOSSA.**

*Diglossopsis caerulescens saturata* Todd, Proc. Biol. Soc. Wash., 30, p. 128, 1917—La Palmita, Santander, Colombia (type in Carnegie Museum); Hartert and Goodson, Nov. Zool., 24, p. 494, 1917—Mérida, Venezuela, and Bogotá (crit.); Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 169 (in text), 1924—Colombia (Tatamá Mountain and Bogotá) and Mérida, Venezuela (crit.).

*Uncirostrum cyaneum* Lafresnaye, Rev. Zool., 3, p. 102, 1840—Santa Fé de Bogotá (part, "foemina aut junior"; cf. Sclater, Ibis, 1875, p. 219, footnote).

*Diglossa personata* (not *Agrilorhinus personatus* Fraser) Reichenbach, Handb. Spez. Orn., livr. 5, p. 231, pl. 552, fig. 3752, 1853—part, "female."

*Diglossopsis caerulescens* (not of Sclater, 1856) Sclater, Cat. Coll. Amer. Bds., p. 49, 1862—part, spec. b, Bogotá; Wyatt, Ibis, 1871, p. 324—Potrerros, Santander; Sclater, Ibis, 1875, p. 219—part, Colombia (Potrerros and Bogotá); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Santa Elena, Antioquia (eggs descr.); Salvin, Cat. Strickl. Coll., p. 175, 1882—Bogotá; Sclater, Cat. Bds. Brit. Mus., 11, p. 11, 1886—part, spec. d-g, Bogotá and Santa Elena, Colombia.

*Diglossopsis caerulescens caerulescens* Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1093—Tatamá Mountain, western Andes, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 582, 1917—Nóvita Trail, Cerro Munchique, and west of Popayán, western Andes; Almaguer and El Eden, central Andes; El Piñon, eastern Andes, Colombia.

*Diglossa caerulescens* Berlepsch, Journ. Orn., 32, p. 286, 1884—Bucaramanga, Colombia.

*Range*.—Subtropical and Temperate zones of Colombia (except Santa Marta region) and extreme western Venezuela (Cordillera of Mérida).<sup>3</sup>

8: Venezuela (Culata, 2; Páramo de Tamá, 1); Colombia (Bogotá, 1; Cachiri, Santander, 2; Páramo de Tamá, 2).

<sup>1</sup> *Material examined*.—Venezuela: "Caracas," 2; Silla de Caracas, 8; Galipán, Cerro del Avila, 19.

<sup>2</sup> *Diglossa caerulescens saturata* (Todd): Differs from *D. c. caerulescens* by much darker, purplish blue dorsal surface as well as sides of head and neck, while the lower parts are likewise much darker slate blue with the middle line decidedly darker. The tone of the upper parts is more like *D. c. pallida*, though still brighter, more purplish.

*Additional material examined*.—Colombia: Tatamá Mountain, western Andes, 1; Bucaramanga, 1; "Bogotá," 8.—Venezuela: Mérida, 5; El Valle, Mérida, 1.

<sup>3</sup> There is no authentic record of any race of *D. caerulescens* from Ecuador.



**\*Diglossa caerulescens pallida (Berlepsch and Stolzmann).<sup>1</sup>**  
**PERUVIAN BLUISH DIGLOSSA.**

*Diglossopsis caerulescens pallida* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—"in Peruvia alta centrali et septentrionali" (type from Garita del Sol, Dept. Junín, in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 178, 1927); Ménégau, Rev. Franç. d'Orn., 2, p. 9, 1911—Utcubamba, near Taya-bamba, Dept. Libertad, Peru; Bangs and Noble, Auk, 35, p. 458, 1918—Tabaconas, Dept. Cajamarca, Peru; Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 168, 1924—Peru and northwestern Bolivia (Songo) (crit.).

*Diglossa caerulescens pallida* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 420, 1930—Chinchao, Dept. Huánuco, Peru (crit.).

*Diglossopsis caerulescens* (not of Sclater) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Ninabamba, Dept. Junín; idem, l.c., 1879, p. 225—Montaña de Palto and Tambillo, Dept. Cajamarca; idem, l.c., 1882, p. 8—Chachapoyas, Tamiapampa, and Achamal, Dept. Amazonas; idem, Orn. Pér., 1, p. 422, 1884—Peruvian localities.

*Range.*—Subtropical and Temperate zones of Peru, from Tabaconas southward, and northwestern Bolivia (Yungas of La Paz).

4: Peru (Chinchao, Dept. Huánuco, 4).

**\*Diglossa cyanea cyanea (Lafresnaye). MASKED DIGLOSSA.**

*Uncirostrum cyaneum* Lafresnaye, Rev. Zool., 3, p. 102, April, 1840—part, adult, Santa Fé de Bogotá, Colombia<sup>2</sup> (types in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 395, 1930).

*Agrilorhinus personatus* Fraser, Proc. Zool. Soc. Lond., 8, p. 23, July, 1840—Santa Fé de Bogotá, Colombia (type in Derby Collection, now in Liverpool Museum); Bonaparte, Atti Sest. Riun. Sci. Ital. Milano, p. 404, 1845—Bogotá.

*Diglossa cyanea* Jardine, Contrib. Orn., 1849, p. 44—east side of Pichincha, Ecuador.

*Diglossa personata* Lesson, Echo du Monde Sav., 11, (2nd sem.), No. 2, p. 29, 1844 (crit.); Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; idem, l.c., 26, p. 551, 1858—Pinipi, Matos, and Titiacun, Ecuador; idem, l.c., 27, p. 138, 1859—Pallatanga, Ecuador; idem, l.c., 28, pp. 76, 85,

<sup>1</sup> *Diglossa caerulescens pallida* (Berlepsch and Stolzmann): Nearest to *D. c. caerulescens*, but upper parts somewhat darker and duller bluish, and lower surface much paler; the throat, chest, and sides being (instead of slate bluish) dingy pale gray faintly shaded with bluish, the middle of the breast and abdomen whitish, the white edges of the under tail coverts much wider, etc. Wing, (male) 69–74, (female) 63–68; tail, 56–62, (female) 51–54; bill, 12–14.

Two Bolivian specimens agree with the Peruvian series in coloration, but appear to have slightly slenderer bills.

*Material examined.*—Peru: Tamiapampa, 1; Achamal, 1; Chachapoyas, 2; Levanto, 4; Chinchao, Huánuco, 4.—Bolivia: Songo, Yungas of La Paz, 2.

<sup>2</sup> The description of "foemina aut junior" clearly refers to *D. caerulescens saturata* Todd (cf. Sclater, Ibis, 1875, p. 219, footnote).

1860—Lloa and Calacali, Ecuador; idem, Cat. Coll. Amer. Bds., p. 49, 1862—Matos, Pinipi, and Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 274—Bogotá (crit.);<sup>1</sup> Slater, Ibis, 1875, p. 218—part, Colombia and Ecuador; Slater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496, pl. 42, fig. 1 (egg)—Retiro and Santa Elena, Antioquia, Colombia; Salvin, Cat. Strickl. Coll., p. 175, 1882—Bogotá; Berlepsch, Journ. Orn., 32, p. 285, 1884—Bucaramanga, Colombia; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 287—Chaguarapata, Cayandeled, Tribulpata, and Cechce, Ecuador; idem, l.c., 1885, p. 75—Baños, Ecuador; Slater, Cat. Bds. Brit. Mus., 11, p. 10, 1886—part, spec. a-n, Bogotá, Retiro, Antioquia, Santa Elena, Quito, San Lucas, "Santa Rita," Pallatanga, Matos, Pinipi (Colombia and Ecuador); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 11, 1899—Huaca, Pun, and Frutillas, Ecuador; Goodfellow, Ibis, 1901, p. 317—Nanegal, Intag, and western Andes (to 11,000 ft.), Ecuador; Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 86, 1911—Lloa and Lanlin, Ecuador; Piguet, Mém. Soc. Neuchât. Sci. Nat., 5, p. 809, 1914—Medellin, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 582, 1917—San Antonio, Cerro Munchique, west of Popayán, Laguneta, Santa Elena, Barro Blanco, Río Toché, El Eden, Santa Isabel, Almaguer, Aguadita, El Roble, El Piñon, and Subia, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—Lloa, Nono, Chinguil, and below Calacali, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 639, 1926—above Chambo, Hacienda Garzón, Chunchi, El Chiral, Zaruma, Taraguacocha, Salvias, Loja, upper Sumaco, and above Baeza, Ecuador (crit.); Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—Pilon and Cerro Mojanda, Ecuador.

**Range.**—Subtropical and Temperate zones of western Venezuela (Cordillera of Mérida), Colombia (except Santa Marta region), and Ecuador; (?) northwestern Peru (vicinity of Huancabamba, Dept. Piura).<sup>2</sup>

14: Venezuela (Rio Mucujón, 1); Ecuador (Hoyaueshi, 2; Nono, 1; Chical, 2); Colombia (El Piñon, 1; Santa Elena, Antioquia, 2; Páramo de Tamá, 2; Bogotá, 3).

**\*Diglossa cyanea melanopsis Tschudi.<sup>3</sup> BLACK-FACED DIGLOSSA.**

<sup>1</sup> The specimen without black on the face mentioned by Cassin probably pertained to *D. caeruleascens saturata*.

<sup>2</sup> Two specimens from Mérida agree in every respect with others from Colombia. Birds from the Huancabamba region, Peru, according to Chapman, are smaller and paler, and may deserve separation.

**Additional material examined.**—Colombia: Bogotá, 9; Bucaramanga, 1.—Ecuador: Guallabamba, Riobamba, 1; Lloa, 3; Nanegal, 5.—Venezuela: Mérida, 2.

<sup>3</sup> *Diglossa cyanea melanopsis* Tschudi: Differs from the typical race by larger size, duller and less purplish blue coloration of the plumage, lighter fore-crown, and by having the under tail coverts less strongly, sometimes even not at all, tipped with white. Wing (males), 76–82; tail, 60–65.

The characters of this form are most strongly developed in birds from southeastern Peru and Bolivia. Specimens from the more northern parts of Peru, while

*Diglossa melanopsis* Tschudi, Arch. Naturg., 10, (1), p. 294, 1844—Peru—Dept. Junín (type in Neuchâtel Museum).

*Diglossa personata* (not *Agrilorhynchus personatus* Fraser) Tschudi, Faun. Peru., Aves, p. 237, 1846—Peru; Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Maraynioc, Peru; Sclater, Ibis, 1875, p. 218—part, Peru (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 596—Tilotilo and Caguarani, Bolivia; Taczanowski, l.c., 1880, p. 193—Cutervo, Peru; idem, l.c., 1882, p. 8—Tamiapampa, Peru; idem, Orn. Pér., 1, p. 421, 1884—Maraynioc, Cutervo, Tamiapampa, and Paucal, Peru; Sclater, Cat. Bds. Brit. Mus., 11, p. 10, 1886—part, spec. o-q, "Kawarani" [=Caguarani] and Tilotilo, Bolivia; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 334—Maraynioc and Garita del Sol, Peru; Ménégau, Rev. Franç. d'Orn., 2, p. 9, 1911—Cumpang, Peru.

*Diglossa personata melanopsis* Chapman, Bull. U. S. Nat. Mus., 117, p. 115, 1921—Matchu Picchu, Torontoy, and Occobamba Valley, Dept. Cuzco, Peru (crit.).

*Diglossa cyanea melanopsis* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 419, 1930—mountains near Pano, Dept. Huánuco, Peru (crit.).

**Range.**—Subtropical and Temperate zones of Peru and western Bolivia (depts. of La Paz and Cochabamba).

9:Peru (Molinopampa, 2; Uchco, 1; Pano Mountains, Huánuco, 6).

### Genus CHLOROPHANES Reichenbach

*Chlorophanes* Reichenbach, Handb. Spez. Orn., livr. 5, p. 233, 1853—type, by monotypy, *Coereba atricapilla* Vieillot=*Motacilla spiza* Linnaeus.

#### \**Chlorophanes spiza axillaris* Zimmer.<sup>1</sup> EAST BRAZILIAN GREEN HONEY CREEPER.

*Chlorophanes spiza axillaris* Zimmer, Proc. Biol. Soc. Wash., 42, p. 90, 1929—Bahia, Brazil (type in Field Museum of Natural History).

*Coereba spiza* (not *Motacilla spiza* Linnaeus) Wied, Beitr. Naturg. Bras., 3, (2), p. 771, 1831—Villa Viçosa, Rio Peruhype, Bahia.

variously intermediate to *D. c. cyanea*, as a whole seem also better referable to the southern race.

**Additional material examined.**—Bolivia: Songo, 3; Tilotilo, 1.—Peru: Sierra of Carabaya, 4; Garita del Sol, 1; Maraynioc, 3.

<sup>1</sup>*Chlorophanes spiza axillaris* Zimmer: Nearest to *C. s. spiza* but general color of adult male slightly more greenish, especially on the belly; hind neck without the yellowish sheen, usually well-pronounced in the typical form; axillaries, under wing coverts, and tibial feathers decidedly paler, light gray rather than sooty blackish; female with under parts brighter as well as more uniform green.

Birds from Santa Catharina are larger (wings of males 74–76 against 66–71), but the series at hand is far too small to ascertain the stability of this divergency, inasmuch as typical *C. s. spiza* varies considerably in size within the same locality.

**Material examined.**—Bahia, 6; Braço do Sul, Victoria, Espírito Santo, 2; Rio de Janeiro, 1; Santa Catharina, Blumenau, 1; Joinville, 7.

*Dacnis spiza* Burmeister, Syst. Uebers. Th. Bras., 3, p. 152, 1856—eastern Brazil.

*Dacnis atricapilla* (not *Coereba atricapilla* Vieillot) Sclater, Contrib. Orn., 1851, p. 108—part, Brazil (Villa Viçosa on the Rio Peruhype); Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Minas and Rio de Janeiro (spec. examined).

*Chlorophanes atricapilla* Cabanis, Journ. Orn., 22, p. 84, 1874—Cantagallo, Rio de Janeiro.

*Chlorophanes spiza* Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1886—part, spec. h-k, Pernambuco, Bahia, and Rio Claro, "Goyaz," Brazil; Ihering, Rev. Mus. Paul., 4, p. 152, 1900—Cantagallo, Rio de Janeiro; idem, l.c., 5, p. 265, 1902—São Sebastião, São Paulo; idem, Cat. Faun. Braz., 1, p. 344, 1907—part, Santa Catharina, São Paulo (São Sebastião, Ubatuba), Minas Geraes, and Bahia.

**Range.**—Wooded coast region of eastern Brazil, from Pernambuco south to Santa Catharina.

1: Brazil (Bahia, 1).

**\**Chlorophanes spiza spiza* (Linnaeus). GREEN HONEY CREEPER.**

*Motacilla spiza* Linnaeus, Syst. Nat., 10th ed., 1, p. 188, 1758—based on "The Green Black-cap Flycatcher" Edwards, Nat. Hist. Bds., 1, p. 25, pl. 25, left fig., Surinam (descr. male; type in coll. of Duke of Richmond).<sup>1</sup>

*Coereba atricapilla* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 14, p. 50, 1817—"au Brésil et à Cayenne" (descr. male).

*Turdus micans* Hahn, Vög. aus Asien, Afrika, etc., livr. 3, pl. 1, 1819—"Indien," errore (descr. male; type in Munich Museum examined).

*Neclarinia mitrata* Lichtenstein, Verz. Doubl. Berliner Mus., p. 15, 1823—based on *Certhia spiza* var.  $\beta$  Latham, Ind. Orn., 1, p. 292, 1790;<sup>2</sup> Surinam, Brazil, and Guiana.

*Dacnis spiza* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 675, "1848"—British Guiana; Léotaud, Ois. Trinidad, p. 122, 1866—Trinidad.

*Dacnis atricapilla* Sclater, Contrib. Orn., 1851, p. 108—part, British Guiana, Cayenne, and Trinidad; Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Rio Xié, Guia, Rio Içanna, Rio Vaupé, and Barra do Rio Negro, Rio Negro (spec. examined); Finsch, Proc. Zool. Soc. Lond., 1870, p. 560—Trinidad (crit.).

*Chlorophanes atricapilla* Sclater, Proc. Zool. Soc. Lond., 23, p. 137, 1855—part, Cayenne and Trinidad; idem, Cat. Coll. Amer. Bds., p. 52, 1862—part, spec. a, b, Trinidad and Cayenne; Taylor, Ibis, 1864, p. 81—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 166—Pilar [Sucré], Venezuela.

*Chlorophanes spiza* Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 31, 1857—Cayenne; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, pp. 267, 268—part, Cayenne and Trinidad (nomencl.); Berlepsch, Ibis, 1881, p. 242 (nomencl.);

<sup>1</sup> The variety  $\beta$  of Linnaeus, based on the other figure of Edwards's plate 25, represents the female of *Dacnis cayana cayana* (Linnaeus).

<sup>2</sup> Nearly all the references quoted by Latham pertain to the Guianan form.

Salvin, *Ibis*, 1885, p. 206—Bartica Grove, Merumé Mountains, and Roraima; Sclater, *Cat. Bds. Brit. Mus.*, 11, p. 29, 1886—part, subsp. typica, spec. a-g, Trinidad, Bartica Grove, Roraima, Cayenne; Robinson and Richmond, *Proc. U. S. Nat. Mus.*, 24, p. 176, 1901—San Julián, Venezuela; Chapman, *Bull. Amer. Mus. N. H.*, 6, p. 26, 1894—Princes-town, Trinidad; Berlepsch and Hartert, *Nov. Zool.*, 9, p. 15, 1902—Suapure and Nicare, Caura, Venezuela; Cherrie, *Mus. Brookl. Inst., Sci. Bull.*, 1, p. 188, 1906—Aripo, Trinidad; Snethlage, *Journ. Orn.*, 55, p. 292, 1907—Pará; idem, *l.c.*, 56, p. 521, 1908—Arumatheua, Rio Tocantins; Berlepsch, *Nov. Zool.*, 15, p. 111, 1908—Cayenne; Stone, *Proc. Acad. Nat. Sci. Phila.*, 65, p. 210, 1913—Cariaquito, Paria Peninsula, Venezuela; Snethlage, *Bol. Mus. Goeldi*, 8, p. 465, 1914—Pará (Pará, Ananindeua, Peixe-Boi), Rio Tocantins (Arumatheua), and Rio Jamauchim (Santa Helena); idem, *Bol. Mus. Nac. Rio de Janeiro*, 2, No. 6, p. 60, 1926—Tury-assú, Maranhão; Chubb, *Bds. Brit. Guiana*, 2, p. 485, 1921—numerous localities.

*Chlorophanes spiza* Hartert, *Nov. Zool.*, 5, p. 481, 1898 (char., range); Hellmayr, *l.c.*, 13, p. 10, 1906—Caparo and Valencia, Trinidad; idem, *Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl.*, 26, No. 2, p. 8, 1912—Peixe-Boi, Pará; idem and Seilern, *Arch. Naturg.*, 78, A, Heft 5, p. 51, 1912—San Esteban, Cumbre Chiquita, and Las Quiguas, Carabobo, Venezuela; Cherrie, *Mus. Brookl. Inst., Sci. Bull.*, 2, p. 164, 1916—Orinoco Delta (Guanoco) and Caura River, Venezuela; Beebe, *Zoologica (N.Y.)*, 2, p. 99, 1916—Utinga, Pará; Bangs and Penard, *Bull. Mus. Comp. Zool.*, 62, p. 84, 1918—Lelydorp and Rijsdijkweg, Surinam; Stone, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 176, 1928—Pará.

(?) *Chlorophanes melanops* Cassin,<sup>1</sup> *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 268—"Rio Negro" (type lost, formerly in Academy of Natural Sciences, Philadelphia; cf. Stone, *Proc. Acad. Nat. Sci. Phila.*, 51, p. 35, 1899).

*Range.*—French, Dutch, and British Guiana; Venezuela (north coast from the Paria Peninsula west to Carabobo; Orinoco Delta and Caura Valley); Trinidad; northern Brazil, from the coast of Maranhão (Tury-assú) through the eastern part of Pará State west to the Tapajóz, and north of the Amazon west to the Rio Negro and its tributaries (Rio Içanna, Rio Vaupé).<sup>2</sup>

<sup>1</sup> This form, of which the type has been lost, is said to resemble *C. s. spiza*, but to differ by the restriction of the black on the crown (which extends but little beyond the eyes), by the scale-like structure of the green feathers on the occiput and back of the neck, and by having the green edges to the remiges and rectrices wider as well as more clearly defined. An adult male from the Rio Içanna (upper Rio Negro region) in the Vienna Museum shows none of these characters, and does not appreciably differ from Guianan specimens.

<sup>2</sup> Specimens from Pará (Peixe-Boi) are similar to others from the Guianas, and series from various parts of Venezuela do not seem to differ. Cory's record (*Bds. W. Ind.*, p. 69, 1889) from Cuba was doubtless based upon an escaped cage-bird.

*Material examined.*—Brazil: Peixe-Boi, Pará, 4; Manáos, 3; Guia, Rio Negro, 1; Rio Içanna, 1.—French Guiana: Saint-Jean-du-Maroni, 1; Cayenne, 2.—British Guiana: Bartica Grove, 2.—Trinidad: Caparo, 10.—Venezuela: Cumaná, 4; Paria Peninsula (Yacua, Guiría), 5; Guanoco, Orinoco Delta, 3; Caura Valley, 6; Carabobo (San Esteban, Las Quiguas, Cumbre Chiquita), 22.

8: Venezuela (Guanoco, 1); British Guiana (Caramang River, 2; unspecified, 1); Brazil (Utinga, Pará, 1); Trinidad (Valencia, 3).

**\**Chlorophanes spiza caeruleascens* Cassin. AMAZONIAN BLUE-GREEN HONEY CREEPER.**

*Chlorophanes caeruleascens* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 268—Yuracares, Bolivia (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, l.c., 51, p. 35, 1899); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 13, 1899—Zamora, Ecuador.

*Caereba atricapilla* (not of Vieillot) Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 24, 1838—Yuracares, Bolivia.

*Dacnis atricapilla* Sclater, Contrib. Orn., 1851, p. 108—part, Yuracares, Bolivia; idem, Proc. Zool. Soc. Lond., 22, p. 110, 1854—Quijos, Ecuador; Peizeln, Orn. Bras., 1, p. 26, 1868—part, Salto do Girão, Rio Madeira, and Engenho do Cap Gama, Matto Grosso.

*Chlorophanes atricapilla* Sclater, Proc. Zool. Soc. Lond., 23, p. 137, 1855—part, "Bogotá" and Peru; idem, l.c., 25, p. 263, 1857—Ega, Rio Solimões; idem, l.c., 26, pp. 61, 452, 1858—Rio Napo and Gualaquiza, Ecuador; idem, Cat. Coll. Amer. Bds., p. 52, 1862—part, spec. c-f, Bogotá and Peru; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper Ucayali; idem, l.c., 1867, p. 749—Xeberos; idem, l.c., 1867, p. 977—Pebas; idem, l.c., 1873, p. 260—Ucayali, Xeberos, Chamicuros, and Pebas, Peru; idem, l.c., 1879, p. 597—Yuracares, Nairapi, and Simacu, Bolivia; Taczanowski, l.c., 1882, p. 9—Huambo and Yurimaguas, Peru; idem, Orn. Pér., 1, p. 435, 1884—Peruvian localities (part, excl. Palmal).

*Chlorophanes spiza* (not *Motacilla spiza* Linnaeus) Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1888—part, subsp. *caeruleascens*, spec. a-e, g-l, "Bogotá," Rio Napo, Sarayacu, Iquitos, Nairapi, and Simacu.

*Chlorophanes spiza* subsp. Hellmayr, Nov. Zool., 17, p. 271, 1910—Salto do Girão, Rio Madeira.

*Chlorophanes spiza caeruleascens* Allen, Bull. Amer. Mus. N. H., 2, pp. 69, 80, 1889—"Quito," Ecuador, and Falls of the Madeira, Bolivia; Berlepsch, Journ. Orn., 37, p. 295, 1889—Cumbase, near Tarapoto, Peru; idem and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 337—La Merced and Borgoña, Peru; idem, Orn., 13, p. 108, 1906—Rio Cadena, Marcapata, Peru; Ménégau, Rev. Franç. d'Orn., 2, p. 9, 1911—Nuevo Loreto, Peru; idem, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 88, 1911—Gualaquiza and Rio Napo, Ecuador; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 15, 1920—Yahuarmayo and Chaquimayo, Sierra of Carabaya, Peru; Chapman, Bull. Amer. Mus. N. H., 36, p. 587, 1917—part, Florencia and La Morelia, Caquetá, Colombia; idem, l.c., 55, p. 647, 1926—eastern Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—San José, Ecuador; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 300, 1930—Buena Vista, Bolivia.

*Chlorophanes spiza spiza*(?) Naumburg, Bull. Amer. Mus. N. H., 60, p. 366, 1930—Rio Roosevelt, Matto Grosso.

*Range*.—Upper Amazonia, from the eastern base of the eastern Andes in Colombia (Rio Putumayo; Florencia and La Morelia, Caquetá) south through eastern Ecuador and Peru to northern Bolivia and northern Matto Grosso (Salto do Girão, upper Rio Madeira; Engenho do Gama, Rio Guaporé; Rio Roosevelt).<sup>1</sup>

11: Peru (Moyobamba, 1; Rio Colorado, Chanchamayo, 1; Puerto Bermúdez, 2; Huachipa, 1; Vista Alegre, 3); Colombia (Bogotá, 3).

**\**Chlorophanes spiza subtropicalis* Todd.<sup>2</sup> COLOMBIAN BLUE-GREEN HONEY CREEPER.**

*Chlorophanes spiza subtropicalis* Todd, Proc. Biol. Soc. Wash., 37, p. 122, 1924—La Cumbre, western Andes, Colombia (type in Carnegie Museum, Pittsburgh).

<sup>1</sup> Specimens from Peru, eastern Ecuador, and southeastern Colombia agree with two from Yuracares. Although no adult males are available from the upper Rio Madeira and northern Matto Grosso, there can be little doubt as to the Green Honey Creeper of that region being referable to the race *caerulescens*. In the male sex, this form differs by its much more bluish coloration, when compared with *C. s. spiza*. The female sometimes has the throat very nearly as yellow as *C. s. subtropicalis*.

*Material examined*.—Colombia: Florencia, 2; "Bogotá," 4.—Ecuador: San José, 2.—Peru: Chanchamayo, Dept. Junín, 3; Pozuzo, Dept. Huánuco, 2; Chacumayo, Sierra of Carabaya, 2; Yahuar Mayo, 3.—Bolivia: Yuracares, 2.—Brazil: Salto do Girão, Rio Madeira, 1; Engenho do Gama, Rio Guaporé, Matto Grosso, 1.

<sup>2</sup> *Chlorophanes spiza subtropicalis* Todd: Similar to *C. s. caerulescens* in the male sex, but the light-colored streak along the lower edge of the maxilla extended very nearly to the tip; female with throat bright yellow and with more or less distinct yellow margins to the feathers of the breast and middle abdomen. Wing, 72–74, (female) 70–72; tail, 46–49; bill, 13–14.

This form, originally described from the Subtropical zone of the western Andes, seems to be widely distributed in Colombia. Adult birds from the west slope of the central Andes (Miraflores, east of Palmira) are certainly indistinguishable from others taken in the western Andes, the females showing the characteristic yellow suffusion underneath. Birds from the Tropical lowlands of the Pacific coast (Noanamá, Nóvita, Buenaventura) are intermediate to *C. s. exsul*. They are slightly smaller (wing of adult males, 68–69) and not quite so bluish in the male sex, though one from Noanamá is a close match to specimens from Miraflores. The females are also somewhat variable, one from Buenaventura being but slightly more yellowish below than certain Ecuadorian birds, whereas one from Noanamá, by reason of its bright yellow throat and distinct, though narrow, yellow lateral edges to the pectoral feathers, typically represents *subtropicalis*. Taken as a whole, the inhabitants of the Pacific coast are, however, much nearer to the latter than to *exsul*. The form found in the Magdalena Valley needs further study with more comprehensive material than I have been able to examine. A female from Honda, with nearly uniform green under parts, looks very much like *C. s. caerulescens*, while a "Bogotá" skin (presumably from the Magdalena slope of the eastern Andes) closely resembles one from Buenaventura. Berlepsch (MS.), in speaking of a series of "Bucaramanga" specimens, notices the large extent of the pale margin to the commissure in the males, as well as the frequent yellow admixture on the under parts of the females, features that would place the birds with *subtropicalis* rather than *caerulescens*.

*Material examined*.—Colombia: Noanamá, 2; Nóvita, 4; Buenaventura, 1; Bitaco Valley, Valle, 2; La Cumbre, Valle, 1; Cauca Seca, 1; Rio Lima, 1; Miraflores, 3; Jerico, 1; Honda, 1; "Bogotá," 1.

*Chlorophanes atricapilla* (not *Coereba atricapilla* Vieillot) Wyatt, Ibis, 1871, p. 324—near Canta and San Nicolas, Magdalena slope of eastern Andes, Santander, Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 497—Concordia and Remedios, Antioquia.

*Chlorophanes spiza* subsp. (*caerulescens* Cass.?) Berlepsch, Journ. Orn., 32, p. 286, 1884—Bucaramanga (crit.).

*Chlorophanes spiza* (not *Motacilla spiza* Linnaeus) Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1886—part, subsp. *caerulescens*, spec. f, Medellin, Antioquia.

*Chlorophanes spiza caerulescens* (not of Cassin) Bangs, Proc. Biol. Soc. Wash., 18, p. 186, 1905—Rio Lima, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 587, 1917—part, Las Lomitas, San Antonio, Miraflores, La Frijolera, Consuelo (above Honda), Aguadita, and La Palma, Colombia.

*Chlorophanes spiza exsul* (not of Berlepsch and Taczanowski) Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1096—Noanamá and Nóvita, Pacific coast of Colombia (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 586, 1917—Cocal (?), Buenaventura, and San José, western Colombia (crit.).

**Range.**—Tropical and Subtropical zones of Colombia, from the Pacific coast east to the Magdalena Valley.

3: Colombia (Cauca Seca, western Andes, 1; Miraflores, central Andes, 1; “Bogotá,” 1).

**\*Chlorophanes spiza exsul** Berlepsch and Taczanowski.<sup>1</sup> PACIFIC GREEN HONEY CREEPER.

*Chlorophanes spiza exsul* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo, Ecuador (type in Berlepsch Collection, now in Frankfort Museum); Hartert, Nov. Zool., 5, p. 481, 1898—Chimbo (crit.); Bangs, Proc. Biol. Soc. Wash., 18, p. 186, 1905—part, Ecuador (Paramba); Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 82, 1922—below Nanegal, Ecuador (crit.); Chapman, Bull. Amer. Mus. N. H., 55, p. 646, 1926—Esmeraldas, Rio de Oro, Chimbo, Rios Coco and Chimbo, Naranjo, Zaruma, and Las Piñas, Ecuador.

*Chlorophanes atricapilla* (not *Coereba atricapilla* Vieillot) Sclater, Proc. Zool. Soc. Lond., 27, p. 138, 1859—Pallatanga, Ecuador; idem, l.c., 28, p. 292, 1860—Esmeraldas; Taczanowski, Orn. Pér., 1, p. 435, 1884—part, Palmal, Peru; Goodfellow, Ibis, 1901, p. 319—Santo Domingo and Guanacillo, Ecuador.

*Chlorophanes spiza* (not *Motacilla spiza* Linnaeus) Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1886—part, subsp. *guatemalensis*, spec. r, Balzar, Ecuador.

**Range.**—Tropical and Lower Subtropical zones of western Ecuador and extreme northwestern Peru (Palmal, Dept. Tumbes).

<sup>1</sup>*Chlorophanes spiza exsul* Berlepsch and Taczanowski: Male much more greenish than either *C. s. subtropicalis* or *C. s. caerulescens* and more like *C. s. spiza*, from which it differs mainly by lacking the bluish tinge along the median under parts; female without any, or with mere suggestions of yellowish fringes to the throat feathers. Wing, 66–69, (female) 64–66; tail, 44–47; bill, 13–14.

**Material examined.**—Western Ecuador: Paramba, Prov. Imbabura, 7; Lita, 7; Chimbo, 10.



7: Ecuador (Paramba, Prov. Imbabura, 1; Chimbo, Prov. Guayas, 6).

**\*Chlorophanes spiza arguta** Bangs and Barbour.<sup>1</sup> COSTA RICAN GREEN HONEY CREEPER.

*Chlorophanes spiza arguta* Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 225, 1922—Divala and Mount Sapo, Panama (type from Divala, western Panama, in Museum of Comparative Zoology, Cambridge, Mass.); Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 462, 1928—Boquete Trail, Almirante Bay, Panama; Griscom, Bull. Mus. Comp. Zool., 69, p. 186, 1929—Cana, eastern Panama (crit.); Peters, l.c., 71, p. 340, 1931—Changuinola, Almirante, and Boquete Trail, Panama; Griscom, l.c., 72, p. 367, 1932—Permé and Obaldia, Darien.

*Chlorophanes guatemalensis* (not of Sclater) Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 349—Panama Railroad (crit.); Salvin, l.c., 1867, p. 137—Cordillera de Tolé, Veragua, and David, Chiriquí; idem, l.c., 1870, p. 185—Veragua (Calovévora, Boquete de Chitrá) and Chiriquí (Bugaba).

*Chlorophanes guatemalensis* Salvadori, Atti Accad. Sci. Torino, 4, p. 172, 1868—Costa Rica.

*Chlorophanes spiza* var. *guatemalensis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—"Juiz" and Turrialba, Costa Rica; Frantzius, Journ. Orn., 17, p. 297, 1869—Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 54—Naránjo, Costa Rica.

*Chlorophanes atricapilla* (not *Coereba atricapilla* Vieillot) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 319, 1862—Panama Railroad.

*Chlorophanes spiza* (not *Motacilla spiza* Linnaeus) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 175, 1865—David, Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 247, 1883—part, Costa Rica and Panama; Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1886—part, subsp. *guatemalensis*, spec. j-q, Costa Rica (Tucurriquí) and Panama (Cordillera de Tolé, Calovévora, Bugaba, Lion Hill); Underwood, Ibis, 1896, p. 435—Miravalles, Costa Rica; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Chiriquí; Bangs, Proc. Biol. Soc. Wash., 19, p. 111, 1906—Pózo Azul and San José, Costa Rica (crit.).

*Chlorophanes spiza guatemalensis* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—part, Naránjo, Pózo Azul de Pirris, and Turrialba, Costa Rica;

<sup>1</sup> *Chlorophanes spiza arguta* Bangs and Barbour: Similar in coloration to *C. s. guatemalensis*, but decidedly smaller, with slenderer, though not always shorter bill; not unlike *C. s. exsul*, but somewhat larger, with longer, more robust bill, and coloration of males deeper greenish. Wing (adult males), 68-72; tail, 46-49; bill, 14½-16.

Birds from southwestern Costa Rica (Pózo Azul de Pirris and El General) are identical with Chiriquí examples, while those from Caribbean Costa Rica (Carrillo, La Vijagua) by slightly greater dimensions (wing of adult males, 71-74; bill, 16-16½) tend in the direction of *guatemalensis*.

*Additional material examined*.—Panama, Chiriquí: Frances, 3; Bugaba, 1; Chiriquí, 5.—Costa Rica: El General de Terraba, 5; Pózo Azul de Pirris, 3; Carrillo, 6; La Vijagua, 4.

Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Boruca, Costa Rica; Bangs, Auk, 18, p. 369, 1901—Divala, Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 383, 1902—part, Costa Rica and Panama; Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 275, 1910—Port Limón and Guayábo, Costa Rica; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 277, 1918—Gatun, Panama.

*Chlorophanes spiza exsul* (not of Berlepsch and Taczanowski) Bangs, Proc. Biol. Soc. Wash., 18, p. 186, 1905—part, Panama and Chiriquí (crit.); idem, Auk, 24, p. 306, 1907—Boruca and Paso Real, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 823, 1910—Costa Rica (crit., habits).

*Range*.—Costa Rica and Panama, east to Darien.

10: Costa Rica (Carrillo, 1; Peralta, 1; Guayábo, 2; Turrialba, 1; Puerto Limón, 3; Boruca, 1); Panama (Barro Colorado Island, Canal Zone, 1).

### ***Chlorophanes spiza guatemalensis* Sclater.<sup>1</sup> GUATEMALAN GREEN HONEY CREEPER.**

*Chlorophanes guatemalensis* Sclater, Proc. Zool. Soc. Lond., 1861, p. 129—Guatemala=Choctum, Vera Paz (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 52, 1862—Choctum, Vera Paz; Salvin, Ibis, 1866, p. 203—Guatemala; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 836—San Pedro, Honduras; Salvin, Ibis, 1872, p. 315—Chontales, Nicaragua.

*Chlorophanes atricapilla* (not *Coereba atricapilla* Vieillot) Sclater and Salvin, Ibis, 1859, p. 14—Guatemala; idem, Ibis, 1860, p. 32—Guatemala; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 41, 1878—Vera Paz, Guatemala.

*Chlorophanes spiza* (not *Motacilla spiza* Linnaeus) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 247, 1883—part, Guatemala, Honduras, and Nicaragua; Sclater, Cat. Bds. Brit. Mus., 11, p. 29, 1886—part, subsp. *guatemalensis*, spec. a-i, Guatemala (Vera Paz, Rio Pasión), Honduras (San Pedro), Nicaragua (Chontales); Richmond, Proc. U. S. Nat. Mus., 16, p. 487, 1893—Rio Escondido, Nicaragua.

*Chlorophanes spiza guatemalensis* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—part, Guatemala; Ridgway, Proc. U. S. Nat. Mus., 10, p. 585, 1888—Segovia River, Honduras; idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 383, 1902—part, eastern Guatemala, Honduras, and Nicaragua; Bangs, Bull. Mus. Comp. Zool., 39, p. 153, 1903—Ceiba, Honduras; Austin, l.c., 69, p. 390, 1929—Mountain Cow, British Honduras; Peters, l.c., 69, p. 469, 1929—Lancetilla, Honduras; Griscom,

<sup>1</sup> *Chlorophanes spiza guatemalensis* Sclater is the largest form, with long, heavy bill and deep green coloration in the male sex. Wing (adult males), 75–80; tail, 52–55; bill, 16½–18.

We have examined ten Guatemalan specimens, mostly from Coban, and one (adult male) from San Pedro, Honduras. Material from Nicaragua not being available, I am not quite certain that birds from that country are really referable to *guatemalensis*.

Bull. Amer. Mus. N. H., 64, p. 372, 1932—Finca Chamá, Secanquim, and Finca Sepacuite, Guatemala; Huber, Proc. Acad. Nat. Sci. Phila., 84, p. 243, 1932—Eden and Bluefields, Nicaragua.

*Range*.—Eastern Guatemala, British Honduras, Honduras, and eastern Nicaragua.

### **Chlorophanes purpurascens** Sclater and Salvin.<sup>1</sup> PURPLISH HONEY CREEPER.

*Chlorophanes purpurascens* Sclater and Salvin, Nomencl. Av. Neotrop., p. 157, 1873—"Venezuela, prope urbem Caraccas" (type in coll. of P. L. Sclater, now in British Museum, examined); Sclater, Cat. Bds. Brit. Mus., 11, p. 31, pl. 4, 1886—Venezuela.

*Range*.—Unknown, supposedly Venezuela.

### **Genus IRIDOPHANES** Ridgway<sup>2</sup>

*Iridophanes* Ridgway, Proc. Wash. Acad. Sci., 3, p. 150, 1901—type, by orig. desig., *Dacnis pulcherrima* Sclater.

<sup>1</sup> *Chlorophanes purpurascens* Sclater and Salvin, known from a single example, is quite distinct from *C. spiza*. The bill, while of the same shape, lacks the pale margin along the commissure of the maxilla, though the lower mandible is wholly yellow as in the allied species. The body plumage, instead of being bright green, is of a dull blue (between "Colombia blue" and "Neropaline blue" of Ridgway). The black color about the head is much reduced in extent, only a narrow frontal band, the loreal region, and the surrounding of the eye being dull black, and the feathers of the crown blackish with dull blue apical margins, whereas in *C. spiza* the whole crown and all the sides of the head are occupied by a solid deep black "mask." The interscapulum (plain green in *C. spiza*) is black, broadly margined apically with dull blue; the larger upper wing coverts, bluish green like the back in *C. spiza*, are also black, with narrow dull blue edges along the outer web only; remiges wholly black, the innermost secondaries only externally margined with dull blue; tail black with mere traces of bluish outer margins. The whole under surface, including malar region, cheeks, and chin, which are black in *C. spiza*, is dull blue, with suggestion of a blackish spot on each side of the chest; under wing coverts soiled whitish (not sooty as in *C. spiza*). Wing, 71; tail, 45; bill, 17.

The type specimen, apparently an adult male, was purchased by P. L. Sclater in 1872 from Adolphe Boucard, and is labeled "Caracas," a locality that I strongly question. It is a trade skin of the so-called "Trinidad" or "Orinoco" make—characterized by loose wings and legs, half-open bill, and spread tail—and shows exactly the same preparation as specimens of *Hylonympha macrocerca* Gould, whose habitat is likewise unknown.

<sup>2</sup> Genus *Iridophanes* Ridgway: Nearly allied to *Chlorophanes*, but bill proportionately much shorter, laterally less compressed, and apically much less convex; tarsus decidedly shorter, being equal to middle toe with claw; style of coloration quite different.

While the final classification of this genus depends on the results of an investigation of its anatomical characters, I am, for the present, inclined to refer it to the Coerebidae rather than to the Tanagers. It offers many analogies to *Chlorophanes* in structure, the slightly swollen basal portion and the yellowish margin of the cutting edge of the maxilla being the most striking points of resemblance. The different proportions of the bill and tarsus, however, appear to me of sufficient importance to separate it generically.

**Iridophanes pulcherrima pulcherrima (Sclater). YELLOW-COLLARED IRIDOPHANES.**

*Dacnis pulcherrima* Sclater, Rev. Mag. Zool., (2), 5, p. 480, 1853—"in Nova-Grenada"—Bogotá (descr. of male; type in coll. of P. L. Sclater, now in British Museum); idem, Proc. Zool. Soc. Lond., 23, p. 137, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 51, pl. 8 (male), 1862—New Granada; idem, Ibis, 1863, p. 316—Bogotá (descr. of male); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270 (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—Paltaypampa, Peru; idem, Orn. Pér., 1, p. 432, 1884—Paltaypampa; Sclater, Cat. Bds. Brit. Mus., 11, p. 24, 1886—part, spec. a-c, Bogotá.

*Nemosia torquata* Du Bus, Bull. Acad. Roy. Sci., Lettr. et Beaux-Arts Belgique, 22, (1), p. 155, 1855—"Nouvelle Grenade" (descr. of male; type in Brussels Museum); Sclater, Proc. Zool. Soc. Lond., 23, p. 84 (note), 1855 (crit.).

*Chlorophanes pulcherrima stigmatura* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 338—Garita del Sol, Dept. Junín, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 179, 1927); idem, Ornith., 13, pp. 77, 108, 1906—Idma, Urubamba, and Huaynapata, Marcapata, Dept. Cuzco, Peru (crit.).

*Dacnis pulcherrima aureinucha* (not of Ridgway) Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 76—Machay, Ecuador (descr. of adult and young female).

*Iridophanes pulcherrima pulcherrima* Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Idma, Urubamba, Peru (crit.); idem, Bull. Amer. Mus. N. H., 55, p. 647, 1926—below Oyacachi, Ecuador.

**Range.**—Subtropical zone of eastern Colombia ("Bogotá" collections), eastern Ecuador, and eastern Peru, south to Dept. of Cuzco.<sup>1</sup>

**Iridophanes pulcherrima aureinucha (Ridgway).<sup>2</sup> WESTERN YELLOW-COLLARED IRIDOPHANES.**

*Dacnis pulcherrima*  $\beta$  *aureinucha* Ridgway, Proc. U. S. Nat. Mus., 1, "1878," p. 484, pub. May, 1879—Ecuador (descr. of male; type in U. S. National Museum).

<sup>1</sup> The white subapical spot on the inner web of the lateral rectrices, claimed to distinguish the Peruvian *stigmatura*, seems to be a purely individual character without geographical significance. I find it in one out of three Bogotá skins, while it is present only in one among six Peruvian specimens. In agreement with Dr. Chapman I am, therefore, led to the conclusion that there is only one form on the east side of the Andes ranging from Colombia to the Bolivian boundary.

**Material examined.**—Colombia: "Bogotá," 5.—Ecuador: Machay, 2.—Peru: Pozuzo, Dept. Huánuco, 2; Garita del Sol, Dept. Junín, 1; Idma, Urubamba, 5; Huaynapata, Marcapata, 1.

<sup>2</sup> *Iridophanes pulcherrima aureinucha* (Ridgway): Male similar to *I. p. pulcherrima*, but nape much darker, deep golden yellow instead of straw yellow; throat less blackish, often decidedly gray; bill slightly longer. In this form the white subapical marking on the outermost rectrix appears to be a constant feature; at least it is so in all the specimens we have examined.

**Material examined.**—Western Ecuador: Guala, 2; Santo Domingo, 2; Guancillo, 1; unspecified, 2.

*Dacnis pulcherrima* (not of Sclater, 1853) Sclater, Cat. Bds. Brit. Mus., 11, p. 24, 1886—part, spec. a-d, "Intaj" [=Intag] and "Sarayacu" (errore), Ecuador; Goodfellow, Ibis, 1901, p. 318—Santo Domingo and Guanacillo, western Ecuador (crit.).

*Iridophanes pulcherrima* (*aureinucha* Ridgway or) *guleae* Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 83, 1922—Gualea, Ecuador (type in Stockholm Museum).

*Iridophanes pulcherrima aureinucha* Chapman, Bull. Amer. Mus. N. H., 55, p. 648, 1926—Gualea (crit.).

*Range*.—Subtropical zone of western Ecuador (Santo Domingo, Gualea, Guanacillo, Intag).

### Genus CYANERPES Oberholser

*Cyanerpes* Oberholser, Auk, 16, p. 32, 1899—type, by orig. desig., *Certhia cyanea* Linnaeus.

#### \**Cyanerpes cyaneus tobagensis* Hellmayr and Seilern.<sup>1</sup> TOBAGO HONEY CREEPER.

*Cyanerpes cyanea tobagensis* Hellmayr and Seilern, Verh. Orn. Ges. Bay., 12, p. 88, 1914—Man o' War Bay, Tobago (type in Munich Museum).

*Cereba cyanea* (not *Certhia cyanea* Linnaeus) Jardine, Ann. Mag. Nat. Hist., 20, p. 372, 1847—Tobago.

*Arbelorhina cyanea* Cory, Auk, 10, p. 220, 1893—Tobago.

*Coereba cyanea* Dalmás, Mém. Soc. Zool. France, 13, p. 136, 1900—Tobago.

*Cyanerpes cyanea* Hellmayr, Nov. Zool., 13, p. 9, 1906—part, Tobago.

*Cyanerpes cyaneus brevipes* (not *Arbelorhina brevipes* Cabanis) Oberholser, Auk, 16, p. 33, 1899—part, Tobago.

*Range*.—Island of Tobago.

48: Tobago.

#### \**Cyanerpes cyaneus cyaneus* (Linnaeus). BLUE HONEY CREEPER.

*Certhia cyanea* Linnaeus, Syst. Nat., 12th ed., 1, p. 188, 1766—based on "The Black and Blue Creeper" Edwards, Glean. Nat. Hist., 2, p. 114, pl. 264, Surinam; "Le Grimpereau bleu du Brésil" Brisson, Orn., 3, p. 628, pl. 31, fig. 5, "Brésil et Cayenne," etc.; Surinam (ex Edwards, first quoted by Linnaeus) designated as type locality (auct. Hellmayr, Nov. Zool., 13, p. 9, 1906).

<sup>1</sup> *Cyanerpes cyaneus tobagensis* Hellmayr and Seilern: Nearest to *C. c. cyaneus*, but wings and tail considerably longer, bill stouter and less strongly arched. Wing, 69–72, (female) 66–69; tail, 41–45, (female) 41–43; bill, 18½–21, (female) 18–19.

The females, in addition to their larger size, differ from the typical form by their darker, less yellowish under parts with the green streaking more clearly defined. The bill, in length, is subject to much variation. Sometimes it is very nearly as long as in *C. c. eximius*, sometimes it corresponds to the average of typical *cyaneus*. It is, however, constantly stouter at the base and apically less arched.

*Additional material examined*.—Tobago: Man o' War Bay, 5; Richmond, 3; Castare, 1; Garret Hall, 1.

*Certhia cayana* Linnaeus, Syst. Nat., 12th ed., 1, p. 186, 1766—based on "Le Grimpereau verd de Cayenne" Brisson, Orn., 3, p. 636, Cayenne (in part, female).

*Certhia armillata* Sparrman, Mus. Carlson., fasc. 2, pl. 36, 1787—Surinam (descr. of young male; type in coll. of M. Carlson);<sup>1</sup> Sundevall, Vetensk. Akad. Handl., 2, No. 3, p. 8, 1857 (crit.).<sup>2</sup>

*Coereba*<sup>3</sup> *cyanea* Wied, Beitr. Naturg. Bras., 3, (2), p. 761, 1831—Rio de Janeiro and Espirito Santo (Barra de Jucú); Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 24, 1838—Guarayos, Bolivia; Burmeister, Syst. Uebers. Th. Bras., 3, p. 150, 1856—Rio de Janeiro to Pará, etc.; Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 31, 1857—Cayenne; Sclater, Proc. Zool. Soc. Lond., 25, p. 263, 1857—Ega, Brazil; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 266—part, Cayenne, Brazil, and Trinidad; Taylor, Ibis, 1864, p. 81—Trinidad; Léotaud, Ois. Trinidad, p. 118, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—Sarayacu, Peru; idem, l.c., 1867, p. 570—Pará and upper Rio Negro; idem, l.c., 1867, p. 749—Xeberos, Peru; Pelzeln, Orn. Bras., 1, p. 25, 1868—Goyaz and Guia, Rio Negro, Brazil; Layard, Ibis, 1873, p. 378—Pará; Finsch, Proc. Zool. Soc. Lond., 1870, p. 561—Trinidad; Sclater and Salvin, l.c., 1873, p. 260—Sarayacu, Xeberos, and Chamicuros, Peru; idem, l.c., 1879, p. 597—Guarayos, Bolivia (ex d'Orbigny); Forbes, Ibis, 1881, p. 330—Estancia, Pernambuco; (?) Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 9—Huambo, Peru; idem, Orn. Pér., 1, p. 436, 1884—Sarayacu, Xeberos, and Chamicuros, Peru; Salvin, Ibis, 1885, p. 207—Bartica Grove, Merumé Mountains, Camacusa, and Roraima; Sclater, Cat. Bds. Brit. Mus., 11, p. 32, 1886—part, spec. c'-r', British Guiana, Cayenne, lower Amazon, Ega, Pernambuco, Bahia, and "Rio Claro," Goyaz; Goeldi, Ibis, 1903, p. 499—Rio Capim, Pará; Snethlage, Journ. Orn., 55, p. 292, 1907—Pará, Santo Antonio do Prata, and Monte Alegre.

*Arbelorhina cyanea* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 675, "1848"—British Guiana; Berlepsch, Journ. Orn., 37, p. 295, 1889—Yurimaguas, Peru (crit.); Allen, Bull. Amer. Mus. N. H., 3, p. 347, 1891—Chapada, Matto Grosso; Chapman, l.c., 6, p. 26, 1894—Princetown, Trinidad; Williams, Bull. Dept. Agric. Trin. and Tob., 20, p. 128, 1922—San Fernando, Trinidad.

*Cyanerpes cyaneus* Oberholser, Auk, 16, p. 32, 1899 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 386, 1902—part, Guianan, Trinidad, Brazilian, and Bolivian references; Hellmayr, Nov. Zool., 12, p. 272, 1905—Igarapé-Assú, Pará; idem, l.c., 13, p. 9, 1906—Valencia, Seelet, Caparo, and Savannah Grande, Trinidad; idem, l.c., 13, p. 356, 1906—Santo Antonio do Prata, Pará; Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 188,

<sup>1</sup> This particular type of Sparrman's is not among those which passed into the Stockholm Museum. Cf. Gyldestolpe, Ark. Zool., 19, A, No. 1, 1926.

<sup>2</sup> Other probable synonyms are *Certhia flavipes* Gmelin (Syst. Nat., 1, (1), p. 472, 1788) and *Certhia cyanogastra* Latham (Ind. Orn., 1, p. 295, 1790), both based upon "Blue-throated Creeper" Latham (Gen. Syn. Bds., 1, (2), p. 734), a very ambiguously described bird from Cayenne in the collection of the Duchess of Portland.

<sup>3</sup> Various spelt *Coereba*, *Caereba*, or *Cereba*.

1906—Aripo, Trinidad; idem, l.c., 1, p. 357, 1908—Aripo; Berlepsch, Nov. Zool., 15, p. 111, 1908—Cayenne, French Guiana; Ihering, Cat. Faun. Braz., 1, p. 344, 1907—Pernambuco, Bahia, Espirito Santo (Porto Cachoeira), and Pará (Santarém); Snethlage, Journ. Orn., 56, p. 522, 1908—Arumatheua, Rio Tocantins; Beebe, Zoologica (N.Y.), 1, p. 101, 1909—Guanoco, Orinoco Delta, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 466, 1914—Pará, Mocajutuba, Ananindeua, Quati-Purú, Santo Antonio do Prata, Rio Tocantins (Arumatheua), Monte Alegre, Obidos, and Maranhão; idem, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—Anil, Maranhão; Chubb, Bds. Brit. Guiana, 2, p. 480, 1921—British Guiana.

*Cyanerpes cyaneus cyaneus* Hellmayr, Nov. Zool., 13, p. 10, 1906—part, Cayenne, British Guiana, Guanoco (Venezuela), Trinidad, and Bahia; idem, l.c., 15, p. 26, 1908—Fazenda Esperança, Goyaz; idem, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Pará, Santo Antonio, Igarapé-Assú, and Rio Capim, Pará; Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 164, 1916—Guanoco, Orinoco Delta; Beebe, Zoologica (N.Y.), 2, p. 98, 1916—Utingá, Pará; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 84, 1918—Rijsdijkweg, Dutch Guiana; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 175, 1928—Pará; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 269, 1929—Tranqueira, São Luiz, and Rosario, Maranhão; Naumburg, Bull. Amer. Mus. N. H., 60, p. 365, 1930—Tapirapoan, Matto Grosso.

*Arbelorhina brevipes* Cabanis, Mus. Hein., 1, p. 96, 1851—"Porto Cabello," Venezuela, errore (type in Heine Collection, now in Halberstadt Museum, examined); Hellmayr, Verh. Orn. Ges. Bay., 13, p. 193, 1917 (crit.).

*Range*.—French, Dutch, and British Guiana, extending through the delta region of the Orinoco to Trinidad; Brazil, south to Rio de Janeiro, Goyaz, and Matto Grosso; eastern Peru; eastern Bolivia (Guarayos).<sup>1</sup>

21: Dutch Guiana (Paramaribo, 1); British Guiana (Mazaruni River, 1; Demerara River, 2; Potaro, 4); Venezuela (Guanoco, Delta Amacuro, 1); Brazil (São Luiz, Maranhão, 1; Rosario, Maranhão, 6; Tranqueira, Maranhão, 2; Chapada, Matto Grosso, 3).

<sup>1</sup> Birds from Trinidad and the Orinoco Delta (Guanoco) agree with a Guianan series. Specimens from Brazil south of the Amazon generally have rather shorter and slenderer bills. If they be deemed worthy of separation, a name exists in *Arbelorhina brevipes* Cabanis, as I have ascertained by examination of the type specimen. The type, purchased from a dealer by the name of Polly, is labeled "Porto Cabello, Venezuela." This is, however, an obvious mistake, since the bird, an adult male, agrees in color and dimensions with others from Pará and Bahia, being much smaller as well as darker blue on the crown than the Caribbean race, *C. c. eximia*. Judging from its preparation, I should say it is a Brazilian trade skin. No material has been available from either Peru or Bolivia.

*Additional material examined*.—French Guiana: Cayenne, 6; Saint-Jean-du-Maroni, 2.—British Guiana: Mines district, 8.—Venezuela: Guanoco, Delta Amacuro, 4.—Trinidad, 26.—Brazil: Pará region, 5; Guia, Rio Negro, 1; Goyaz, 3; Bahia, 4.

**\**Cyanerpes cyaneus eximius* (Cabanis).<sup>1</sup> CARIBBEAN HONEY CREEPER.**

*Arbelorhina eximia* Cabanis, Mus. Hein., 1, p. 96, 1851—Porto Cabello, Venezuela (type in Heine Collection, now in the Municipal Museum, Halberstadt, examined; cf. Hellmayr, Verh. Orn. Ges. Bay., 13, p. 194, 1917).

*Coereba cyanea eximia* Berlepsch, Journ. Orn., 32, p. 287, 1884—Bucaramanga, Colombia; idem, Zeits. Ges. Orn., 4, p. 184, 1887—Bogotá.

*Arbelorhina cyanea eximia* Richmond and Robinson, Proc. U. S. Nat. Mus., 18, p. 679, 1896—Margarita Island (crit.); Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta, Colombia.

*Cyanerpes cyanea(us) eximia(us)* Allen, Bull. Amer. Mus. N. H., 13, p. 173, 1900—Bonda, Cacagualito, and Minca, Colombia; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 176, 1901—San Julián, near La Guaira, Venezuela; Hellmayr, Nov. Zool., 13, p. 10, 1906—San Esteban, Ejido, Cumaná, and Margarita Island, Venezuela (crit.); Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 51, 1912—Cumbre Chiquita, Carabobo, Venezuela; Darlington, Bull. Mus. Comp. Zool., 71, p. 414, 1931—Rio Frio, Magdalena, Colombia.

*Coereba cyanea* (not *Certhia cyanea* Linnaeus) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 266—part, Venezuela (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 166, 627—Pilar and San Esteban, Venezuela; Salvin and Godman, Ibis, 1879, p. 199—Manaure, Santa Marta; idem, Ibis, 1880, p. 119—"Mineá"—Minca, Santa Marta; Sclater, Cat. Bds. Brit. Mus., 11, p. 32, 1886—part, spec. z, a', d', Manaure, Minca, and Venezuela.

*Cyanerpes cyaneus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 386, 1902—part, Venezuela (Caracas, Margarita Island) and Santa Marta; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 209, 1913—Cariaquito and Pedernales, Venezuela; Todd and Carriker, Ann. Carnegie Mus., 14, p. 462, 1922—Tucurinca, Bonda, Cacagualito, Minca, Mamatoco, La Tigra, Las Vegas, and Don Diego, Santa Marta district (crit, habits).

*Cyanerpes cyaneus brevipes* (not *Arbelorhina brevipes* Cabanis) Oberholser, Auk, 16, p. 33, 1899—part, Caribbean coast of Colombia and Venezuela (crit.); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 250, 1909—Porlamar, Margarita Island.

<sup>1</sup> *Cyanerpes cyaneus eximius* (Cabanis): Similar to *C. c. cyaneus*, but with decidedly longer bill; crown patch of males in nuptial plumage of a paler, less intense blue. Bill, 20–23, rarely 18–19.

While admitting that certain unusually short-billed examples have by no means longer bills than *C. c. cyaneus*, the majority from the Caribbean coast of Venezuela and Colombia are fairly distinguishable on this score, and the recognition of *C. c. eximius* seems to me justifiable in spite of the doubt that has been cast on its validity. The few not very satisfactory skins from "Bogotá" (probably=Magdalena Valley) appear to be referable to this form, too.

*Additional material examined*.—Venezuela: Yacua, Paria Peninsula, 3; hinterland of Cumaná, 17; San Esteban, Carabobo, 8; Cumbre Chiquita, 2; Margarita Island, 2; Ejido, Mérida, 1.—Colombia: Cartagena, 2; "Bogotá," 3.



*Range*.—Caribbean coast of Venezuela, east to the Paria Peninsula, and Colombia, extending south into the eastern Andes of Colombia (Bucaramanga; "Bogotá").

3: Venezuela (Porlamar, Margarita Island, 1); Colombia (Don Diego, 1; Tucurínca, 1).

**\**Cyanerpes cyaneus carneipes* (Sclater).<sup>1</sup> FLESH-LEGGED HONEY CREEPER.**

*Coereba*<sup>2</sup> *carneipes* Sclater, Proc. Zool. Soc. Lond., 27, p. 376, 1859—Playa Vicente, Oaxaca, and Cordoba, Vera Cruz, Mexico (type, from Playa Vicente, in coll. of P. L. Sclater, now in British Museum); Sclater and Salvin, Ibis, 1860, p. 32—Guatemala; Sclater, Cat. Coll. Amer. Bds., p. 52, 1862—Oaxaca; idem, Proc. Zool. Soc. Lond., 1864, p. 173—"vicinity of city of Mexico"; Sclater and Salvin, l. c., 1864, p. 349—Panama; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, pp. 291, 318, 1861—Panama Railroad; idem, l. c., 8, p. 175, 1865—David, Chiriquí; Salvin, Proc. Zool. Soc. Lond., 1867, p. 137—Santa Fé, Santiago de Veragua, and Cordillera de Tolé, Veragua, and David, Chiriquí, Panama; idem, l. c., 1870, p. 185—Calovévora, Castillo, Chitrá, Cordillera del Chucú, Veragua, and Bugaba, Chiriquí; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 548, 1869—hot districts of Vera Cruz, Mexico.

*Coereba*<sup>2</sup> *cyanea* (not *Certhia cyanea* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 24, p. 286, 1856—Cordoba, Mexico; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 266—part, Nicaragua (crit.); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Costa Rica; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 836—Honduras; Salvin, Ibis, 1872, p. 315—Chontales, Nicaragua; Boucard, Ann. Soc. Linn. Lyon, (n. s.), 25, p. 41, 1878—Guatemala; Nutting, Proc. U. S. Nat. Mus., 6, p. 382, 1883—Sucuyá, Nicaragua; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 248, 1883—part, Mexico to Panama; Sclater, Cat. Bds. Brit. Mus., 11, p. 32, 1886—part, spec. a, b, d-y, Mexico to Panama; Salvin, Ibis, 1888, p. 257—Cozumel Island; Underwood, Ibis, 1896, p. 435—Miravalles, Costa Rica.

*Arbelorhina cyanea* Cabanis, Journ. Orn., 8, p. 410, 1860—Costa Rica (crit.); Ridgway, Proc. U. S. Nat. Mus., 10, p. 579, 1887—Trujillo, Honduras; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Las Trojas de Puntarenas, San José, Alajuela, Pózo Azul de Pirris, and Monte Redondo

<sup>1</sup> *Cyanerpes cyaneus carneipes* (Sclater): Very similar to *C. c. cyaneus* and agreeing in proportion of bill; pale blue cap of male in nuptial plumage more restricted in area, being separated from the black mantle by a much wider purplish blue band; female much more yellowish underneath, especially on throat and middle line.

Although disregarded by recent authorities, this race seems to me entitled to recognition, as long as *C. c. eximius* is maintained. The only other feasible course is to unite all three forms, a procedure I dislike to advocate in view of the relative stability of their characters when checked with the aid of adequate series. The yellowish edge along the inner webs of the rectrices alluded to by Cabanis, when tentatively proposing the name *A. marginata* for the Costa Rican bird, appears to be an individual variation, though I have nowhere else seen it developed to such an extent as in some specimens from that country.

<sup>2</sup> Sometimes spelt "*Caereba*."

de San José, Costa Rica; Richmond, Proc. U. S. Nat. Mus., 16, p. 487, 1893—San Carlos and Rio Escondido, Nicaragua; Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Lagarto, Boruca, Térraba, and Buenos Aires, Costa Rica.

*Cyanerpes cyaneus* Bangs, Proc. New Engl. Zool. Cl., 2, p. 28, 1900—Loma del León, Panama; idem, Auk, 18, p. 31, 1901—San Miguel Island; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 386, 1902—part, Central American references; Bangs, Bull. Mus. Comp. Zool., 39, p. 153, 1903—Ceiba, Honduras; Thayer and Bangs, l.c., 46, p. 157, 1905—San Miguel Island; idem, l.c., p. 221, 1906—savanna of Panama; Cole, l.c., 50, p. 146, 1906—Xbac, Yucatan; Bangs, Auk, 24, p. 306, 1907—Boruca, Paso Real, and Lagarto, Costa Rica; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 126, 1907—Patulul and Mazatenango, Guatemala; Carriker, Ann. Carnegie Mus., 6, p. 822, 1910—Pígres, San José, El General, Pózo Azúl de Pirris, Miravalles, El Hogar, and Boruca, Costa Rica; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 277, 1918—Gatun, Panama; Rendahl, Ark. Zool., 13, No. 4, p. 49, 1920—Pearl Islands; Hallinan, Auk, 41, p. 320, 1924—Farfan, Rio Algarrobo, and Sosa Hill, Panama.

*Cyanerpes cyaneus cyaneus* Austin, Bull. Mus. Comp. Zool., 69, p. 390, 1929—Mountain Cow, British Honduras; Peters, l.c., 69, p. 469, 1929—Tela, Honduras; Griscom, Bull. Amer. Mus. N. H., 64, p. 371, 1932—Guatemala.

*Cyanerpes cyaneus carneipes* Oberholser, Auk, 16, p. 33, 1899—from southern Mexico to Panama (crit.); Bangs, Auk, 18, p. 369, 1901—Divala, Chiriquí; idem, Proc. New Engl. Zool. Cl., 3, p. 63, 1902—Boquete, Chiriquí; Peters, Auk, 30, p. 378, 1913—Camp Mengel, Quintana Roo.

*Arbelorhina marginata* Cabanis, Journ. Orn., 8, p. 411, 1860—Costa Rica (type in Berlin Museum).

**Range.**—Tropical zone of Central America, from southern Mexico, in states of Vera Cruz, Oaxaca, Yucatan, Quintana Roo, etc., south to the Isthmus of Panama, including the Pearl Islands.

34: Mexico (Buenavista, Yucatan, 1); Guatemala (San Felipe, Retalhuleu, 1; Patulul, 2; Mazatenango, 7); Honduras (Trujillo, 1); Nicaragua (San Gerónimo, Chinandega, 11; San Emilio, Lake Nicaragua, 3); Costa Rica (Las Cañas, 1; Miravalles, 2; El General, 1; El Pózo de Térraba, 1); Panama (Colón, 3).

### ***Cyanerpes cyaneus ramsdeni* Bangs.<sup>1</sup> RAMSDEN'S HONEY CREEPER.**

<sup>1</sup>*Cyanerpes cyaneus ramsdeni* Bangs: "Differs from the other races by having the pale blue crown patch in the adult male very small and restricted to the crown itself and not extending to the occiput. Female rather darker above and paler, more yellowish below. Wing, 63; tail, 34½; exposed culmen, 16 mm." (Bangs, l.c.).

Not having any material from Cuba, I am greatly in doubt as to the propriety of recognizing this form, which has recently been disregarded and relegated to the synonymy of *C. c. cyaneus* by the describer himself. It has been suggested that the bird was not a native of Cuba; but if it was introduced this must have been done many years ago, since Gundlach, in 1844, found it already widespread on the island. Certain characters given by Bangs, such as the restricted crown patch of

*Cyanerpes cyaneus ramsdeni* Bangs, Proc. New Engl. Zool. Cl., 4, p. 91, 1913—Rio Seco, near Guantanamo, Cuba (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Caereba cyanea* (not *Certhia cyanea* Linnaeus) d'Orbigny, in La Sagra, Hist. phys. pol. nat. Cuba, Ornith., p. 124, 1839—Cuba (San Diego); Lembeye, Aves Cuba, p. 131, 1850—Cuba; Sclater, Cat. Bds. Brit. Mus., 11, p. 32, 1886—part, spec. c, Cuba; Cory, Auk, 3, p. 53, 1886—Cuba (monog.); idem, Bds. West Ind., p. 67, 1889—Cuba; Scott, Auk, 10, p. 339, 1893—Kingston, Jamaica (possibly escaped cage-bird).

*Arbelorhina cyanea* Cabanis, Journ. Orn., 4, p. 98, 1856—Cuba (crit.); Gundlach, Rep. Fis.-Nat. Cuba, 1, p. 290, 1866—Cuba; idem, Orn. Cub., p. 105, 1893—Cuba; Chapman, Bull. Amer. Mus. N. H., 4, p. 310, 1892—San Pablo, Cuba.

*Cyanerpes cyaneus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 386, 1902—part, Cuba and Jamaica; Barbour, Mem. Nutt. Orn. Cl., 6, p. 121, 1923—Cuba (crit., range).

*Cyanerpes cyaneus cyaneus* Bangs, Bull. Mus. Comp. Zool., 70, p. 397, 1930—Cuba (crit.).

*Cyanerpes cyaneus brevipes* (not *Arbelorhina brevipes* Cabanis) Oberholser, Auk, 16, p. 33, 1899—part, Cuba.

*Range*.—Islands of Cuba and Jamaica (one record from Kingston).

**\**Cyanerpes cyaneus pacificus* Chapman.<sup>1</sup> PACIFIC HONEY CREEPER.**

*Cyanerpes cyaneus pacificus* Chapman, Bull. Amer. Mus. N. H., 34, p. 655, 1915—Barbacoas, Nariño, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 585, 1917—Buenaventura, San José, Los Cisneros, Tumaco, and Barbacoas, Colombia; idem, l.c., 55, p. 645, 1926—Esmeraldas and coast of Manaví, Ecuador.

*Range*.—Tropical zone of western Colombia, from Buenaventura southwards, and northwestern Ecuador, south to Manaví.

5: Colombia (San José, 1); Ecuador, Prov. Esmeraldas (Pambilár, 2; Vacqueria, 1; San Javier, 1).

the male and the yellowish under parts of the female, point to the Central American race (*C. c. carneipes*), and this assimilation is corroborated by Barbour's note that Cuban birds are "not separable from those of Panama and Nicaragua." Under these circumstances I hesitate to drop the Cuban race and recommend the investigation of the problem to one equipped with the necessary material. The occurrence of the Blue Honey Creeper in Jamaica seems to be altogether fortuitous, it being even possible that the single example taken by Scott was an escaped cage-bird.

<sup>1</sup> *Cyanerpes cyaneus pacificus* Chapman: Differs readily in both sexes from all the other races by the much paler, naphthalene to barium yellow, instead of bright strontian yellow, color of the under wing coverts and quill lining. The light blue crown patch of the adult male is generally darker, more bluish (near calamine blue) and even more restricted than in *C. c. carneipes*, the purplish blue nuchal band being correspondingly wider. Length and shape of bill about the same as in east Brazilian specimens of *C. c. cyaneus*. Wing, 67–70, (female) 67; tail, 38–41, (female) 43; bill, 15–17.

**Cyanerpes cyaneus gigas** Thayer and Bangs.<sup>1</sup> GORGONA ISLAND  
HONEY CREEPER.

*Cyanerpes gigas* Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 96, 1905—Gorgona Island, Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, l.c., 70, p. 397, 1930).

*Coereba cyanea* (not *Certhia cyanea* Linnaeus) Sclater, Cat. Bds. Brit. Mus., 11, p. 32, 1886—part, spec. b', Gorgona.

*Range*.—Gorgona Island, off Colombia.

**\*Cyanerpes caeruleus longirostris** (Cabanis).<sup>2</sup> TRINIDAD HONEY  
CREEPER.

*Arbelorhina longirostris*<sup>3</sup> Cabanis, Mus. Hein., 1, p. 96, 1851—"Caracas," errore, we substitute Trinidad (descr. of young male and female; types in Heine Collection, now in Halberstadt Museum, examined); Hellmayr, Verh. Orn. Ges. Bay., 13, p. 194, 1917 (crit.).

*Coereba longirostris* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 267—Trinidad (crit.); Finsch, Proc. Zool. Soc. Lond., 1870, p. 561—Trinidad (crit.).

*Coereba caeruleus longirostris* Oberholser, Auk, 16, p. 34, 1899—part, Trinidad (crit.).

*Coereba trinitatis* Bonaparte, Compt. Rend. Acad. Sci., Paris, 38, p. 258, 1854—"ex Insula Sancta-Trinitas" (type in coll. of J. and E. Verreaux, now in Paris Museum); idem, Not. Orn. Coll. Delattre, p. 50, 1854—same locality.

*Cyanerpes caerulea trinitatis* Hellmayr, Nov. Zool., 13, p. 8, 1906—Valencia and Savannah Grande, Trinidad (crit.); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 187, 1906—Aripo, Trinidad; idem, l.c., p. 357, 1908—Aripo.

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Taylor, Ibis, 1864, p. 81—Trinidad; Léotaud, Ois. Trinidad, p. 120, 1866—Trinidad.

<sup>1</sup> *Cyanerpes cyaneus gigas* Thayer and Bangs: Similar to *C. c. pacificus* in pale under wing coverts and quill lining, but coloration of male darker and more purplish, near "cyanine-blue"; female darker and more yellowish below.

This form, which is only known from two immature males and one female in the Museum of Comparative Zoology at Cambridge, and a single adult male in the British Museum, we have not seen. Its characters as given above are based on Chapman's remarks in Bull. Amer. Mus. N. H., 34, p. 655, 1915.

<sup>2</sup> *Cyanerpes caeruleus longirostris* (Cabanis): Closely similar in coloration to *C. c. caeruleus*, but with much larger, longer as well as heavier, bill. Wing, 55–59; tail, 27–30; bill, 20  $\frac{1}{2}$ –24.

This race, which is confined to Trinidad, differs very little in coloration from its continental representative, though the males frequently have the crown of a darker blue, nearly uniform with the rest of the upper surface, while the females are generally darker green above and have the throat somewhat deeper ochraceous. The typical specimens of *A. longirostris*, said to be from "Caracas" on the authority of a dealer, proved to be identical with a series from Trinidad.

*Additional material examined*.—Trinidad: Valencia, 20; Caparo, 12; Aripo, 4.

<sup>3</sup> Misprinted "*longirostristis*" on page 96, corrected on page 234.

*Arbelorhina caerulea* Chapman, Bull. Amer. Mus. N. H., 6, p. 25, 1894—Trinidad (habits).

*Range*.—Island of Trinidad.

1: Trinidad (Valencia, 1).

**\**Cyanerpes caeruleus caeruleus* (Linnaeus). PURPLE HONEY CREEPER.**

*Certhia caerulea* Linnaeus, Syst. Nat., 10th ed., 1, p. 118, 1758—based on "Blue Creeper" Edwards, Nat. Hist. Bds., 1, p. 21, pl. 21 (=male), Surinam.

*Certhia cayana* Linnaeus, Syst. Nat., 12th ed., 1, p. 186, 1766—based on "Le Grimpeau verd de Cayenne" Brisson, Orn., 3, p. 636, pl. 33, fig. 2, Cayenne (part, "male"=female).<sup>1</sup>

*Certhia ochrochlora* Gmelin, Syst. Nat., 1, (1), p. 472, 1789—based on "Yellow-cheeked Creeper" Pennant, Gen. Bds., p. 60, pl. 3, fig. 2 (=female); Surinam.

*Certhia surinamensis* Latham, Ind. Orn., 1, p. 295, 1790—based on "Yellow-cheeked Creeper" Pennant, Gen. Bds., p. 60, pl. 3, fig. 2; Surinam.

*Arbelorhina caerulea* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 675, "1848"—British Guiana; Riker and Chapman, Auk, 7, p. 266, 1890—Santarém; Phelps, Auk, 14, p. 363, 1897—San Antonio [Sucré], Venezuela.

*Coereba*<sup>2</sup> *caerulea* Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 31, 1857—Cayenne; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 266—Cayenne; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 167—Pilar [Sucré], Venezuela; Pelzeln, Orn. Bras., 1, p. 25, 1868—part, Pará; Layard, Ibis, 1873, p. 378—Pará; Salvin and Godman, Ibis, 1880, p. 119—"Mineia" [=Minca], Colombia; Salvin, Ibis, 1885, p. 207—Bartica Grove, Merumé Mountains, Camacusa, and Roraima, British Guiana; Sclater, Cat. Bds. Brit. Mus., 11, p. 33, 1886—part, spec. a, b, r, w-e', Minca, Santarém, Roraima, Camacusa, Bartica Grove, Berbice, Maroni River, Cayenne, and Pará; Ménégau, Bull. Mus. Hist. Nat., Paris, 10, p. 116, 1904—Kourou, Sinnamary, and Mahury, French Guiana; Snethlage, Journ. Orn., 55, p. 292, 1907—Pará, Santo Antonio do Prata, and Rio Mojú, Pará; Penard, Vog. Guyana, 2, p. 475, 1910—Surinam.

*Cyanerpes caeruleus*(a) Oberholser, Auk, 16, p. 34, 1899—part, Venezuela and British Guiana; Hellmayr, Nov. Zool., 12, p. 272, 1905—Igarapé-Assú and Bemfica, Pará; Ihering, Cat. Faun. Braz., 1, p. 344, 1907—part, Pará; Snethlage, Journ. Orn., 56, pp. 498, 522, 1908—Villa Braga, Rio Tapajóz, and Arumatheua, Rio Tocantins; Berlepsch, Nov. Zool., 15, p. 112, 1908—Ipousin, Approuague River, French Guiana; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 210, 1913—Cariaquito, Paria Peninsula, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 466, 1914—Pará, Mocajatuba, Providencia, Ananindeua, Santa Isabel, Santo Antonio do Prata, Rio Mojú,

<sup>1</sup> Brisson, the sole basis of Linnaeus, described the female plumage of the present species as "male," while the diagnosis of his supposed female is referable to the same sex of *C. cyaneus cyaneus*.

<sup>2</sup> Various spelt *Coereba*, *Caereba*, and *Cereba*.

Rio Tocantins (Arumatheua), Rio Tapajóz (Boim, Villa Braga), and Rio Jary (Santo Antonio da Cachoeira); idem, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—Tury-assú, Maranhão.

*Cyanerpes caerulea(us) caerulea(us)* Hellmayr, Nov. Zool., 13, p. 8, 1906—Guiana and Venezuela, south to Pará (crit.); idem, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Pará localities; idem and Seilern, Arch. Naturg., 78, A, Heft 5, p. 52, 1912—Las Quiguas, Cumbre Chiquita, and San Esteban, Carabobo (crit.); Beebe, Zoologica (N.Y.), 1, p. 101, 1909—Guanoco, Orinoco Delta; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 164, 1917—Guanoco; Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 84, 1918—vicinity of Paramaribo, Lelydorp, Javaweg, and Rijdsijkweg, Dutch Guiana; Chubb, Bds. Brit. Guiana, 2, p. 483, 1921—British Guiana (numerous localities); Todd and Carriker, Ann. Carnegie Mus., 14, p. 462, 1922—Bonda, Agua Dulce, Las Vegas, Don Diego, and Pueblo Viejo, Santa Marta, Colombia (crit., habits); Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 176, 1928—Pará; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 270, 1929—Tury-assú, Maranhão.

*Arbelorhina caerulea microrhyncha* (not *Coereba caerulea microrhyncha* Berlepsch) Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta, Colombia.

*Cyanerpes caeruleus microrhynchus* Allen, Bull. Amer. Mus. N. H., 13, p. 173, 1900—Bonda, Minca, Onaca, Las Nubes, and Cacagualito, Colombia.

**Range.**—French, Dutch, and British Guiana; northern Venezuela (Orinoco Delta and north coast, from the Paria Peninsula westwards) and northern Colombia (Santa Marta region); northeastern Brazil (Rio Jary; south of the Amazon from the Tapajóz east to north-western Maranhão).<sup>1</sup>

10: French Guiana (Saint-Jean-du-Maroni, 2); Dutch Guiana (Paramaribo, 1); British Guiana (Kalakoon, 1; Mazaruni River, 1; Potaro, 1); Brazil, Pará (Utinga, 3; Igarapé-Assú, 1).

### ***Cyanerpes caeruleus cherriei* Berlepsch and Hartert.<sup>2</sup> CHERRIE'S HONEY CREEPER.**

<sup>1</sup> Venezuelan birds agree with a series from the Guianas, and five adult males from the Orinoco Delta (Guanoco) are also typical. Birds from the Pará region do not seem to be separable either, although some specimens have shorter bills, thereby approaching *C. c. cherriei*.

**Additional material examined.**—French Guiana: Cayenne, 8; Saint-Jean-du-Maroni, 2; Ipousin, Approuague River, 1.—British Guiana: Mines District, 4.—Venezuela: Guanoco, Orinoco Delta, 5; Sucré (Cumaná, San Antonio, etc.), 18; Carabobo (San Esteban, Las Quiguas, Cumbre Chiquita), 18.—Brazil: Pará, 2; Igarapé-Assú, 4; Bemfica, 1.

<sup>2</sup> *Cyanerpes caeruleus cherriei* Berlepsch and Hartert: Similar to *C. c. microrhynchus* (Berlepsch), but decidedly smaller with the bill still shorter and slenderer; under parts of adult males on average slightly less purplish. Wing, 52–54, (female) 53–55; tail, 26–28, (female) 26–29; bill, 15–16, rarely 17.

Birds from western Amazonia (upper Rio Negro; Teffé; Salto do Girão) appear to be identical with the typical series. An adult male from Manaus, con-

*Cyanerpes caerulea cherriei* Berlepsch and Hartert, Nov. Zool., 9, p. 16, 1902—Munduapo and Nericagua, upper Orinoco, Venezuela (type from Munduapo in Tring Museum examined); Hellmayr, l.c., 13, p. 9, 1906—Munduapo (crit.); idem, l.c., 14, pp. 42, 43, 1907—Teffé, Rio Solimões, Brazil (crit., range); idem, l.c., 14, p. 347, 1907—Humaytá, Rio Madeira; idem, l.c., 17, p. 271, 1910—Jamarysinho and Santa Izabel (Rio Preto), Rio Madeira; Snethlage, Bol. Mus. Goeldi, 8, p. 467, 1914 (range); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 165, 1917—Munduapo, Rio Orinoco.

*Cyanerpes caeruleus cherriei* Naumburg, Bull. Amer. Mus. N. H., 60, p. 366, 1930—Morinho Lyra, Matto Grosso.

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 25, p. 263, 1857—Ega, Brazil; Sclater and Salvin, l.c., 1867, p. 570—upper Rio Negro; Sclater, Cat. Bds. Brit. Mus., 11, p. 33, 1888—part, spec. q, Ega.

*Caereba caerulea* Pelzeln, Orn. Bras., 1, p. 25, 1868—part, Salto do Girão and Borba, Rio Madeira, and Marabitanas, Guia, Rio Içanna, and Barra [= Manãos], Rio Negro (spec. examined).

*Cyanerpes coeruleus* Ihering and Ihering, Cat. Faun. Braz., 1, p. 344, 1907—part, Amazonia, Borba, Rio Negro.

**Range.**—Plains of the Amazonian forest region, from the banks of the upper Orinoco (Munduapo, Nericagua) through the western section of the State of Amazonas (Rio Negro; Rio Solimões) south to the Rio Madeira and northern Matto Grosso (Morinho Lyra).

**\**Cyanerpes caeruleus microrhynchus* (Berlepsch).<sup>1</sup> SMALL-BILLED HONEY CREEPER.**

*Coereba caerulea microrhyncha* Berlepsch, Journ. Orn., 32, p. 287, 1884—Bogotá and Bucaramanga, Colombia, and upper Amazonia [= Iquitos, Peru] (type, from Bucaramanga, in Berlepsch Collection, now in Frankfurt Museum, examined).

trary to what we might have expected, is also similar, showing no approach to *C. c. caeruleus*.

**Material examined.**—Venezuela, upper Orinoco: Munduapo, 3; Nericagua, 1.—Brazil: Rio Negro, Marabitanas, 2; Guia, 1; Rio Içanna, 1; Manãos, 1; Teffé, Rio Solimões, 8; Rio Madeira, Humaytá, 1; Salto do Girão, 1; Santa Izabel, Rio Preto, 1; Jamarysinho, Rio Machados, 1.

<sup>1</sup> *Cyanerpes caeruleus microrhynchus* (Berlepsch): Similar to *C. c. caeruleus*, but adult male with forepart of crown, cheeks, and malar region decidedly paler blue; bill slenderer, though not constantly shorter.

Birds from Peru and Ecuador are identical in coloration with those from Colombia, and many do not differ in proportions of bill either. Other specimens, however, have somewhat slenderer, shorter bills, and closely approach *C. c. cherriei*, from which they can only be distinguished by their shorter wings. Females exhibit certain variations, notably in the coloration of the auriculars, as has been pointed out by Mr. Zimmer, but the constancy of this divergency remains to be determined by more adequate series.

**Additional material examined.**—Colombia: Bucaramanga, 1 (the type); Bogotá, 82.—Venezuela: "Mérida," 2.—Ecuador: "Rio Napo," 2.—Peru: Iquitos, 13; Nauta, 2; Pozuzo, Huánuco, 3; Chanchamayo, Junín, 1; Chaquimayo, Carabaya, 1; Yahuarimayo, 4; Rio San Gaban, 1.—Bolivia: San Augustin, 1; Mapiiri, 1.

*Arbelorhina coerulea microrhyncha* Berlepsch, Journ. Orn., 37, p. 295, 1889—Yurimaguas and Cumbase, near Tarapoto, Peru (crit.); idem and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 337—La Merced, Chanchamayo, Peru (crit.).

*Cyanerpes caerulea microrhyncha* Hellmayr, Nov. Zool., 13, p. 9, 1906—Colombia and Mérida to northeastern Bolivia ("Beni"—San Augustin) (crit.); idem, l.c., 14, p. 43, 1907—San Augustin, Bolivia, and Pozuzo, Peru (crit., range); idem, Arch. Naturg., 85, A, Heft 10, p. 14, 1920—Chaquimayo, Yahuarmayo, and San Gaban, Dept. Puno, Peru (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 586, 1917—part, near Honda and Buena Vista (above Villavicencio), Colombia; idem, l.c., 55, p. 646, 1926—Napo, Zamora, and Rio Suno, eastern Ecuador; Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 423, 1930—Vista Alegre, Dept. Huánuco, and Puerto Bermúdez, Dept. Junín, Peru (crit.); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 301, 1930—Buena Vista, Santa Cruz, Bolivia (crit.).

*Cyanerpes caeruleus microrhynchus* Berlepsch and Stolzmann, Ornith., 13, p. 108, 1906—Huaynapata, Rio Cadena, and Escopal, Marcapata, Peru.

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 23, p. 137, 1855—Bogotá (crit.); idem, Cat. Coll. Amer. Bds., p. 53, 1862—part, spec. d, Rio Napo; Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 749—Xeberos, Peru; idem, l.c., p. 977—Pebas, Peru; idem, l.c., 1873, p. 185—Cosnipata, Peru; idem, l.c., 1879, p. 497—Remedios and Medellín, Colombia; idem, l.c., 1879, p. 597—Tilotilo, Simacu, and Nairapi, Prov. Yungas, Bolivia; Taczanowski, Orn. Pér., 1, p. 437, 1884—Huambo, Paltaypampa, Monterico, and Moyobamba, Peru; Sclater, Cat. Bds. Brit. Mus., 11, p. 33, 1886—part, Bogotá, Remedios (Antioquia), Ecuador (Sarayacu), Peru (Pebas, Ucayali), and Bolivia (Nairapi, Simacu); Allen, Bull. Amer. Mus. N. H., 2, p. 80, 1889—Falls of the Madeira and Mapiri, Bolivia (crit.); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 13, 1899—Santiago, Ecuador; Goodfellow, Ibis, 1901, p. 319—Archidona, Ecuador.

*Cyanerpes caeruleus* Oberholser, Auk, 16, p. 34, 1899—part, Bolivia to Colombia; Berlioz, Bull. Mus. Hist. Nat., Paris, 31, p. 233, 1925—Canelos, Ecuador.

*Coereba brevirostris* (not *Arbelorhina brevirostris* Cabanis) Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 267—part, Bogotá.

*Coereba nitida* (not of Hartlaub) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—Paltaybamba, Peru.

**Range.**—Tropical zone of eastern Colombia (Magdalena Valley and east side of eastern Andes), and extreme western Venezuela (Mérida) south through eastern Ecuador and Peru to northern Bolivia.

9: Colombia ("Bogotá," 2); Peru (Moyobamba, 4; Vista Alegre, 1; Puerto Bermúdez, 1); Bolivia (Buenavista, Dept. Santa Cruz, 1).



**\**Cyanerpes caeruleus chocoanus* Hellmayr.<sup>1</sup> CHOCO HONEY CREEPER.**

*Cyanerpes caerulea chocoana* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 14 (footnote), 1920—"São Joaquim" [=San Joaquin] del Chocó, Colombia (type in Munich Museum); Chapman, Bull. Amer. Mus. N. H., 55, p. 646, 1926—western Ecuador (crit.).

*Coereba brevirostris* (not *Arbelorhina brevirostris* Cabanis) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 267—part, Guayaquil, Ecuador.

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo, Ecuador.

*Cyanerpes caerulea microrhyncha* (not of Berlepsch) Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1097—Nóvita, San Joaquin del Chocó, and Rio Cajón, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 586, 1917—part, Quibdó, Juntas de Tamaná, Noanamá, and Barbacoas, Colombia.

**Range.**—Tropical zone of western Ecuador and Pacific Colombia, north to the upper Atrato (Quibdó).

7: Colombia, Rio San Juan, Chocó (Noanamá, 4; Tadó, 3).

**\**Cyanerpes caeruleus isthmicus* Bangs.<sup>2</sup> ISTHMIAN HONEY CREEPER.**

*Cyanerpes lucidus isthmicus* Bangs, Auk, 24, p. 306, 1917—Paso Real, Costa Rica (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 397, 1930); Carriker, Ann. Carnegie Mus., 14, p. 821, 1910—Costa Rica (crit., habits); Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 462, 1928—Boquete Trail, Panama; Peters, Bull. Mus. Comp. Zool., 71, p. 340, 1931—Almirante, Panama; Griscom, l.c., 72, p. 367, 1932—Permé and Obaldia, Panama.

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 24, p. 140, 1856—David, Panama.

*Coereba lucida* (not of Sclater and Salvin) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, pp. 291, 318, 1861—Panama Railroad; Sclater and Salvin, Proc.

<sup>1</sup> *Cyanerpes caeruleus chocoanus* Hellmayr: Nearest to *C. c. microrhynchus*, but wings and tail slightly shorter; adult males less purplish with crown, cheeks, and auriculars much lighter blue; females with paler, more yellowish green upper surface, light buff instead of ochraceous lores and throat, and much narrower as well as paler blue rectal streak. Wing, 53–56, (female) 54–55; tail, 26–28; bill, 17–18.

**Additional material examined.**—Colombia: Nóvita, 2; San Joaquin, Bahía del Chocó, 1; Rio Cajón, 4.

<sup>2</sup> *Cyanerpes caeruleus isthmicus* Bangs: Similar to *C. c. lucidus*, but decidedly smaller with shorter and slenderer bill, especially at base; blue color of adult male darker, the crown and hind neck distinctly lighter than, instead of concolor with, the back; female with dorsal surface slightly duller green and the pileum less bluish. Wing (adult male), 52–56; tail, 25–27; bill, 16–18, rarely 19.

I cannot see in this and the next form anything but well-marked races of *C. caeruleus*.

**Additional material examined.**—Costa Rica: Pózo Azul de Pirris, 6; Siquirres, Rio Reventazón, 1.—Panama: Chiriquí, 2.

- Zool. Soc. Lond., 1864, p. 349—Panama Railroad; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 267—Panama (crit.); Salvin, Proc. Zool. Soc. Lond., 1867, p. 137—David; idem, l.c., 1870, p. 185—Bugaba, Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 249, 1883—part, Panama (David, Bugaba, Panama Railroad); Sclater, Cat. Bds. Brit. Mus., 11, p. 35, 1886—part, spec. h-k, Veragua, Bugaba, and Lion Hill, Panama; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Chiriquí.
- Arbelorhina lucida* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—San José, Port Limón, and Pózo Azul de Pirris, Costa Rica; Cherrie, Auk, 9, p. 23, 1892—San José, Costa Rica; idem, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Boruca and Térraba, Costa Rica; Richmond, Proc. U. S. Nat. Mus., 14, p. 488, 1893—Rio Escondido, Costa Rica (habits).
- Cyanerpes lucidus*(a) Oberholser, Auk, 16, p. 34, 1899—part (crit.); Bangs, Auk, 18, p. 369, 1901—Divala, Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 389, 1902—part, Costa Rican and Panama localities and references.

*Range*.—Tropical zone of Nicaragua, Costa Rica, and Panama east to Darien (Permé and Obaldia).

6: Costa Rica (Limón, 1; San José, 1; Boruca, 2; unspecified, 1); Panama (Boqueron, 1).

**\**Cyanerpes caeruleus lucidus* (Sclater and Salvin). SHINING HONEY CREEPER.**

- Coereba lucida* Sclater and Salvin, Ibis, 1, p. 14, 1859—Guatemala (type in coll. of P. L. Sclater, now in British Museum); Moore, Proc. Zool. Soc. Lond., 27, p. 53, 1859—Omoa, Honduras; Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—Choctum, Vera Paz; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 42, 1878—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 249, 1883—part, Guatemala and Honduras; Sclater, Cat. Bds. Brit. Mus., 11, p. 35, 1886—part, spec. a-g, Guatemala.
- Cyanerpes lucidus*(a) Oberholser, Auk, 16, p. 34, 1899—part, Guatemala; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 389, 1902—part, Guatemalan and Honduran references and localities; Bangs, Bull. Mus. Comp. Zool., 39, p. 153, 1903—Ceiba, Honduras.
- Cyanerpes lucidus lucidus* Griscom, Bull. Amer. Mus. N. H., 64, p. 371, 1932—Guatemala.

*Range*.—Tropical zone of Guatemala (Vera Paz) and Honduras (Omoa, Ceiba).<sup>1</sup>

2: Guatemala (Vera Paz, 2).

**\**Cyanerpes nitidus* (Hartlaub).<sup>2</sup> SHORT-BILLED HONEY CREEPER.**

<sup>1</sup> *Additional material examined*.—Guatemala: Vera Paz, 6.

<sup>2</sup> *Cyanerpes nitidus* (Hartlaub) is immediately recognizable from *C. caeruleus* by its much shorter, stouter as well as less curved bill. Besides, the blue color of the body plumage in the adult male is much brighter, lacking the purplish tone, and

*Coereba nitida* Hartlaub, Rev. Zool., 10, p. 84, 1847—"du nord du Pérou" (descr. male; type in Bremen Museum); Sclater, Proc. Zool. Soc. Lond., 25, p. 264, 1857—Rio Javarri, Brazil; idem, Cat. Coll. Amer. Bds., p. 53, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 267—part, upper Amazon (excl. descr. of female); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 749—Xeberos, Peru; idem, l.c., p. 977—Pebas, Peru; idem, l.c., 1873, p. 260—Xeberos, Chamicuros, and Pebas, Peru; Taczanowski, Orn. Pér., 1, p. 439, 1884—Xeberos, Chamicuros, Pebas, and Lamas; Sclater, Cat. Bds. Brit. Mus., 11, p. 35, 1886—Colombia (Bogotá), Brazil (Ega), and Peru (Pebas, Xeberos, Ucayali).

*Caereba nitida* Strickland, Contrib. Orn., 1850, p. 147, pl. 66, fig. sup. (=adult male)—"from the upper branches of the Amazons"; Pelzeln, Orn. Bras., 1, p. 25, 1868—Marabitanas, Rio Xié, and Rio Içanna, upper Rio Negro, Brazil (spec. examined).

*Arbelorhina nitida* Reichenbach, Handb. Spez. Orn., livr. 5, p. 235, pl. 555, fig. 3772, 1853—Peru, upper Amazon, and "Porto Cabello" (crit.).

*Cyanerpes nitida* Berlepsch and Hartert, Nov. Zool., 9, p. 16, 1902—Suapure and Nicare, Caura River, Venezuela; Hellmayr, l.c., 14, p. 43, 1907—Teffé, Rio Solimões (descr. female); Snethlage, Bol. Mus. Goeldi, 8, p. 467, 1914 (range); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 165, 1917—Caura Valley, Venezuela.

*Cyanerpes nitidus* Oberholser, Auk, 16, p. 35, 1899 (range); Ihering and Ihering, Cat. Faun. Braz., 1, p. 344, 1907 (range); Naumburg, Bull. Amer. Mus. N. H., 60, p. 366, 1930—Rio Roosevelt, Matto Grosso.

*Arbelorhina brevirostris* Cabanis, Mus. Hein., 1, p. 96; 1851—"Porto Cabello," Venezuela, errore (descr. male; type in Heine Collection, now in Halberstadt Museum, examined); Hellmayr, Verh. Orn. Ges. Bay., 13, p. 196, 1917 (crit.).

**Range.**—Upper Amazonia, from the eastern base of the eastern Andes in Colombia and the Caura Valley in Venezuela through eastern Ecuador and the adjoining parts of Brazil (Rio Negro; Rio Solimões) south to eastern Peru and northern Matto Grosso (Rio Roosevelt).

1: Peru (unspecified, 1).<sup>1</sup>

the black gorget is extended onto the middle of the chest, while the female may be distinguished by paler throat, nearly white instead of bright yellow abdominal line, and yellow instead of dusky feet. The dimensions are even less than in *C. c. cherriei*.

Birds from the upper Rio Negro and Venezuela (Caura Valley) do not appreciably differ from Peruvian specimens, and a single native "Bogotá" skin also agrees. The type of *A. brevirostris*, with the obviously erroneous locality "Puerto Cabello," is a perfectly normal example of the present species. Though its identity had already been recognized by Reichenbach, his statement was overlooked by all subsequent authors.

**Material examined.**—Peru: Iquitos, 4.—Colombia: "Bogotá," 1.—Brazil: Marabitanas, Rio Negro, 1; Rio Xié, 1; Rio Içanna, 1; Teffé, Rio Solimões, 1.—Venezuela, Caura Valley: Nicare, 8; Suapure, 2.

<sup>1</sup> Though labeled "Bogotá," this is undoubtedly one of J. Hauxwell's skins from northern Peru.

## Genus DACNIS Cuvier

*Dacnis* Cuvier, Règne Animal, 1, p. 395, "1817" [=Dec. 6, 1816]—type, by virtual monotypy, *Motacilla cayana* Linnaeus.

*Cyanodacnis* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 268—type, by subs. desig. (Sclater, Cat. Bds. Brit. Mus., 11, p. 18, 1886), *Motacilla cayana* Linnaeus.

*Polidacnis* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 269—type, by subs. desig. (Sclater, Cat. Bds. Brit. Mus., 11, p. 18, 1886), *Dacnis angelica* Bonaparte=*Motacilla lineata* Gmelin.

*Eudacnis* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—type, by subs. desig. (Sclater, Cat. Bds. Brit. Mus., 11, p. 18, 1886), *Dacnis flaviventris* Lafresnaye and d'Orbigny.

\**Dacnis cayana cayana* (Linnaeus). CAYENNE DACNIS.

*Motacilla cayana* Linnaeus, Syst. Nat., 12th ed., 1, p. 336, 1766—based on "*Sylvia cayanaensis coerulea*" Brisson, Orn., 3, p. 534, pl. 28, fig. 1;<sup>1</sup> Cayenne (type in coll. of M. de Réaumur).

*Fringilla cyanomelas* Gmelin, Syst. Nat., 1, (2), p. 924, 1789—based on "*Fringilla caerulea, mento, gula, etc. nigris*" Koelreuter, Nov. Comm. Petrop., 11, p. 434, pl. 15, fig. 6 (=male), 1767; "India," errore.

*Motacilla cyanocephala* Gmelin, Syst. Nat., 1, (2), p. 990, 1789—based on "*Sylvia viridis*" Brisson, Orn., 3, p. 531, pl. 28, fig. 4; Cayenne (descr. of female; type in coll. of M. de Réaumur).

*Pipra tricolor* Karsten, Mus. Lesk., 1, p. XXIII, Aves, pl. 2, No. 1 (=female), 1789—"Cape of Good Hope," errore.

*Certhia spiza* (not of Linnaeus) Voigt, Mag. Neuest. Zust. Naturk., 6, (1), p. 16, pl. 1 (=female), 1803—no locality stated.

*C[assicus] T. cayanaensis* Merrem, in Ersch and Gruber, Allgem. Encycl. Wiss., 15, p. 277, 1826—Brazil and Surinam.

*Nectarinia bicolor* Becklemichew, Nouv. Mém. Soc. Imp. Natur. Moscou, 1, p. 378, pl. 23 (=male), 1829—"climats chauds de l'Amérique" (type in coll. of S. Becklemichew).

*Dacnis cyanater* Lesson, Traité d'Orn., p. 458, 1831—"Brésil" (type in Paris Museum examined); Pucheran, Rev. Mag. Zool., (2), 6, p. 70, 1854 (crit.).<sup>2</sup>

<sup>1</sup> Although neither description nor plate indicates the black gular area, as has been pointed out long ago by the late Count Berlepsch (Ibis, 1881, pp. 240-241), authors nowadays agree that Brisson's account, practically the sole basis of *Motacilla cayana* Linnaeus, cannot well be intended for any other species. It is hardly necessary to add that the "Elotototi" of Hernandez from Mexico, quoted by Linnaeus in the synonymy of his *Motacilla cayana*, has no relation to the Cayenne *Dacnis*.

<sup>2</sup> The type, an adult male, has no locality attached to it, and there is absolutely no way of telling whence it might have originated, though "Rio de Janeiro," suggested by us in another connection (Field Mus. Nat. Hist., Zool. Ser., 12, p. 268, 1929) as terra typica, is just as likely as any other place. Considering the circumstance that its dimensions (wing, 64; tail, 44; bill, 12½) furnish no conclusive proof as to subspecific pertinence, it seems best to include the name in the synonymy of *D. c. cayana*.

*Dacnis cyanocephala* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 675, "1848"—British Guiana; Pelzeln, Orn. Bras., 1, p. 25, 1868—part, Matto Grosso, Engenho do Gama, Borba, Rio Negro, Marabitanas, Rio Içanna, Barcellos, Forte do Rio Branco, and Pará, Brazil.

*Dacnis cayana* Strickland, Contrib. Orn., 1851, p. 15 (crit., synonym.); Sclater, l.c., 1851, p. 106—part, Trinidad, Cayenne, and British Guiana; idem, Proc. Zool. Soc. Lond., 22, p. 252, 1854—part, Trinidad, Guiana, and Cayenne; idem, l.c., 23, p. 137, 1855—"Bogotá"; idem, l.c., 25, p. 263, 1857—Ega, Brazil; idem, Cat. Coll. Amer. Bds., p. 50, 1862—"Bogotá," Trinidad, and Cayenne; idem, Ibis, 1863, p. 313—part, "Bogotá," Venezuela, Guiana, Amazonia; Taylor, Ibis, 1864, p. 81—Trinidad; Léotaud, Ois. Trinidad, p. 124, 1866—Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 570—Pará; idem, l.c., 1873, p. 259—part, Ega; idem, l.c., 1875, p. 237—San Cristóbal, Tachira, Venezuela; Layard, Ibis, 1873, p. 378—Pará; Allen, Bull. Essex Inst., 8, p. 78, 1876—Santarém; Salvin, Ibis, 1885, p. 207—Bartica Grove, Merumé Mountains, Camacusa, and Roraima, British Guiana; Riker and Chapman, Auk, 7, p. 266, 1890—Santarém; Chapman, Bull. Amer. Mus. N. H., 6, p. 26, 1894—Trinidad; Berlepsch and Hartert, Nov. Zool., 9, p. 15, 1902—Maipures, Rio Orinoco, and Caura Valley (Suapure, Nicare, La Union, Le Pricion), Venezuela; Hellmayr, l.c., 12, p. 271, 1905—Igarapé-Assú, Pará; Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 188, 1906—Aripo, Trinidad; Ihering, Cat. Faun. Braz., 1, p. 343, 1907—part, Santarém; Snethlage, Journ. Orn., 55, p. 292, 1907—Maracá, Pará, Rio Mojú, Santo Antonio do Prata, Marajó, Monte Alegre, and Maranhão (Jutahizal), Brazil; Berlepsch, Nov. Zool., 15, p. 110, 1908—Cayenne and Roche-Marie, French Guiana; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 209, 1913—Cariquito, Paria Peninsula, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 463, 1914—Pará, Providencia, Ananindeua, Maguary, Santa Izabel, Santo Antonio do Prata, Rio Mojú, Rio Tocantins (Cametá, Baião, Arumatheua), Rio Tapajóz (Boim, Pimental), Marajó (Santa Anna), Maracá, Monte Alegre, Obidos, Rio Jamundá (Faro), and Maranhão; idem, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 60, 1926—Anil, Maranhão; Chubb, Bds. Brit. Guiana, 2, p. 476, 1921—numerous localities.

*Dacnis cayana cayana* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 392, 1902—part, Guiana, Venezuela, and Colombia; Hellmayr, Nov. Zool., 13, p. 10, 1906—Laventille, Seelet, Chaguaramas, and Caparo, Trinidad; idem, l.c., 13, p. 356, 1906—Santo Antonio do Prata, Pará; idem, l.c., 14, p. 29, 1907—Obidos; idem, l.c., 14, p. 346, 1907—Humaytá, Rio Madeira; Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 357, 1908—Carenage and Aripo, Trinidad; Beebe, Zoologica (N.Y.), 1, p. 102, 1909—Guanoco, Orinoco Delta, Venezuela; Hellmayr, Nov. Zool., 17, p. 269, 1910—Santa Izabel, Rio Preto, Rio Madeira; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 50, 1912—Las Quiguas, Cumbre Chiquita, and San Esteban, Carabobo, Venezuela; Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 6, 87, 1912—Pará district; Beebe, Zoologica (N.Y.), 2, p. 98, 1916—Utinga, Pará; Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 165, 1916—Orinoco region; Chapman, Bull. Amer. Mus. N. H., 36, p. 584, 1917—La Morelia, Florencia, and Villavicencio, Colombia

(crit.); Bangs and Penard, *Bull. Mus. Comp. Zool.*, **62**, p. 84, 1918—vicinity of Paramaribo and Rijskijkweg, Dutch Guiana; Hellmayr, *Field Mus. Nat. Hist., Zool. Ser.*, **12**, p. 267, 1929—Tury-assú and São Luiz, Maranhão (crit.); Stone, *Proc. Acad. Nat. Sci. Phila.*, **80**, p. 175, 1928—Pará; Naumburg, *Bull. Amer. Mus. N. H.*, **60**, p. 362, 1930—Rio Roosevelt, Matto Grosso.

*Dacnis cayana* subsp. *typica* Sclater, *Cat. Bds. Brit. Mus.*, **11**, p. 20, 1886—part, spec. k-r, Trinidad, Bartica Grove, Roraima, Camacusa, Cayenne, and Pará.

*Dacnis cyanomelas* Bonaparte, *Bull. Soc. Linn. Normandie*, **2**, p. 31, 1857—Cayenne; Berlepsch, *Ibis*, 1881, p. 241 (crit., nomencl.); idem, *Zeits. Ges. Orn.*, **4**, p. 184, 1887—"Bogotá."

*Dacnis nigripes* (not of Pelzel) Cassin, *Proc. Acad. Nat. Sci. Phila.*, **16**, p. 269, 1864—Cayenne and northern Brazil (crit.).

*Range*.—Northern South America, from the forested coast district of Maranhão, Marajó, the Guianas and Trinidad through Amazonia and Venezuela west to the eastern foot of the eastern Andes in Colombia, and to the Rio Solimões and Rio Madeira in Brazil, extending south to northern Matto Grosso (Villa Bella, Rio Guaporé; Rio Roosevelt).<sup>1</sup>

15: French Guiana (Saint-Jean-du-Maroni, 1); Dutch Guiana (Paramaribo, 1); British Guiana (Mazaruni River, 2); Brazil (Bôa Vista, Rio Branco, 1; Serra da Lua, 1; Rio Maycurú, 1; Manáos, 1; Utinga, Pará, 4; São Luiz, Maranhão, 2; Tury-assú, Maranhão, 1).

<sup>1</sup> Birds from Amazonia and Venezuela are apparently inseparable from a Guianan series, the throat being deep black in the male, and distinctly bluish gray in the female sex. Specimens from northern Matto Grosso are referred by Mrs. Naumburg to typical *cayana*, to which a single adult male from the Rio Roosevelt (6th of March Rapids) seems actually to belong. In the western section of the state the present form obviously intergrades with *D. c. glaucogularis*. A female from Engenho do Gama, Rio Guaporé, agrees in coloration with *cayana*, but is larger, while a male from the same locality closely approaches the Bolivian race in the more greenish blue general plumage, as well as in the less blackish throat. In native "Bogotá" collections typical *cayana* is found along with males that cannot be distinguished from *glaucogularis*, and others more or less intermediate between the two as to the color of the dark gular area. Of course, nothing is known regarding the exact origin of these specimens, and the distribution of the two races in Colombia east of the Andes remains to be determined. It will be noted, however, that Chapman (*Bull. Amer. Mus. N. H.*, **36**, p. 584, 1917) considers birds from Villavicencio and the Caquetá region to be inseparable from the Guianan form. A single male from Roraima is unusually large.

*Additional material examined*.—French Guiana: Cayenne, 14; Roche Marie, 2; Saint-Jean-du-Maroni, 1.—British Guiana: Roraima, 1.—Trinidad: Santa Cruz, 2; Carenage, 4; Caparo, 4; Laventille, 2; Seelet, 1; Chaguaramas, 1; Aripo, 3.—Venezuela: hinterland of Cumaná, 4; Caura Valley, 15; Maipures, Rio Orinoco, 4; Las Quiguas, Carabobo, 3; Cumbre Chiquita, Carabobo, 6; San Esteban, 3.—Brazil: Igarapé-Assú, Pará, 2; Santo Antonio do Prata, 1; Pará, 1; Manáos, 1; Barcellos, 1; Marabitanas, Rio Negro, 1; Obidos, 1; Borba, Rio Madeira, 3; Humaytá, Rio Madeira, 2; Engenho do Gama, Rio Guaporé, 2; Rio Roosevelt, Matto Grosso, 1.—Colombia: "Bogotá," 3.

**\**Dacnis cayana paraguayensis* Chubb.<sup>1</sup> PARAGUAYAN DACNIS.**

*Dacnis cayana paraguayensis* Chubb, Ibis, (9), 4, p. 619, 1910—"Paraguay, Matto Grosso, and southeastern Brazil" (type from Sapucay, Paraguay, in British Museum); Ménégaux, Rev. Franç. d'Orn., 11, p. 6, 1919—Villa Lutetia, San Ignacio, Misiones; Holt, Bull. Amer. Mus. N. H., 57, p. 319, 1928—Monte Serrat, Itatiaya; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 267, 1929—Maranhão (Tranqueira, Bôa Fé, Barra do Corda) and Ceará (Serra de Baturité) (crit.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 363, 1930—Tapirapoan and Utiarity, Matto Grosso.

*Nectarinia cyanocephala* (not *Motacilla cyanocephala* Gmelin) Swainson, Zool. Illust., 2, pl. 117 (male, female), 1822—Brazil.

*Dacnis cyanocephala* Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 435—Minas Geraes (Nascimento, Barbacena, Lagôa Santa, Sete Lagôas), São Paulo (Uberaba, Hytú, Araras), and Rio de Janeiro (Nova Friburgo, Taipú).

*Coereba caerulea* (not *Certhia caerulea* Linnaeus) Wied, Beitr. Naturg. Bras., 3, (2), p. 766, 1831—Rio de Janeiro (crit.).

*Dacnis cyanomelas* (not *Fringilla cyanomelas* Gmelin) Burmeister, Syst. Uebers. Th. Bras., 3, p. 153, 1856—Nova Friburgo, Rio, and Lagôa Santa, Minas Geraes; Pelzel, Orn. Bras., 1, p. 25, 1868—part, Rio de Janeiro, Sapitiba, Ypanema, and Goyaz, Brazil; Berlepsch, Journ. Orn., 21, p. 235, 1873—Blumenau, Santa Catharina (crit.); Boucard and Berlepsch, The Humming Bird, 2, p. 43, 1892—Porto Real, Rio de Janeiro.

*Dacnis cayana* (not *Motacilla cayana* Linnaeus) Sclater, Contrib. Orn., 1851, p. 106—part, Rio de Janeiro; idem, Proc. Zool. Soc. Lond., 22, p. 252, 1854—part, "Brasilia orientalis"; idem, Ibis, 1863, p. 314—part, southern Brazil; Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 268, 1864—Bahia and southern Brazil (monog.); Cabanis, Journ. Orn., 22, p. 84, 1874—Cantagallo, Rio de Janeiro; Forbes, Ibis, 1881, p. 330—Pernambuco; Allen, Bull. Amer. Mus. N. H., 3, p. 347, 1891—Chapada, Matto Grosso; Ihering, Rev. Mus. Paul., 3, p. 141, 1899—Iguapé, São Paulo; idem, l.c.,

<sup>1</sup> *Dacnis cayana paraguayensis* Chubb: Very similar to *D. c. cayana*, but larger, with longer bill; coloration of males less intensely blue; female without any bluish tinge on the throat, the latter being dingy or yellowish gray.

The characters of this race are most strongly developed in Paraguay and the adjoining states of southern Brazil (Santa Catharina and São Paulo). Specimens from this part of the range are invariably large with long, heavy bills, when compared to a series of the northern *cayana*, and the plumage of the adult males is conspicuously more greenish blue. Similar individuals also occur in the more northern parts of Brazil, though their bills are, as a rule, shorter and slenderer. Other specimens from Bahia and Pernambuco, however, are hardly different in dimensions from typical *cayana*.

Birds from the tableland of Matto Grosso are intermediate to *glaucogularis*. The black of the dorsal area in adult males is as dull as in the latter form, and the coloration of the throat is also very similar, though less suffused with greenish; females, however, are more like *paraguayensis*. It is really a matter of personal preference to refer them to one rather than to the other race.

*Additional specimens examined*.—Paraguay: Sapucay, 3.—Brazil: Joinville, Santa Catharina, 71; São Paulo, 10; Sapitiba, Rio de Janeiro, 3; Nova Friburgo, Rio de Janeiro, 4; Água Suja, near Bagagem, Minas Geraes, 6; Bahia, 2; Pão d'Alho, Pernambuco, 2; Oro, Piahy, 1; Barra do Galiota, Maranhão, 1; Goyaz, 5; Chapada, Matto Grosso, 9.

4, p. 152, 1900—Cantagallo and Nova Friburgo, Rio; idem, l.c., p. 208, 1900 (nest and eggs); Nicoll, Ibis, 1904, p. 40—Bahia; Ihering, Cat. Faun. Braz., 1, p. 343, 1907—part, São Paulo (Iguapé, São Sebastião, Ubatuba, Itatiba, Piquete, Cachoeira, Itararé, Avanhandava), Paraná (Ourinho), Minas Geraes (Vargem Alegre), Rio de Janeiro (Ilha Grande), Espírito Santo (Porto Cachoeiro), Santa Catharina (Joinville), and Rio Grande do Sul (Novo Hamburgo); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 86, 1910—Pernambuco (Pão d'Alho, near Recife), Piahy (Oro), and Maranhão (Barra do Galiota); Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará.

*Dacnis cayana cayana* Hellmayr, Nov. Zool., 15, p. 26, 1908—Goyaz (crit.).

*Range*.—Paraguay; northeastern Argentina (Misiones); eastern and southern Brazil from Rio Grande do Sul and Matto Grosso north to Ceará, Piahy, and the interior of Maranhão.

22: Brazil, Maranhão (Tranqueira, 1; Bôa Fé, 1; Barra do Corda, Ponto, 1); Ceará (Serra de Baturité, 4); Bahia (Santo Amaro, 2; Bahia, 1); Minas Geraes (Rio das Velhas, near Lagôa Santa, 1); São Paulo (Baurú, 6; São Sebastião, 1); Matto Grosso (Chapada, 4).

**\**Dacnis cayana glaucogularis* Berlepsch and Stolzmann.<sup>1</sup> DULL-THROATED DACNIS.**

*Dacnis cayana glaucogularis* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 336—La Gloria and La Merced, Chanchamayo, Dept. Junín, Peru (type, from La Merced, in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 179, 1927); idem, Ornith., 13, pp. 77, 108, 1906—Idma (Santa Ana), Huaynapata, and Rio Cadena, Dept. Cuzco, Peru; Ménégau, Rev. Franç. d'Orn., 2, p. 9, 1911—Nuevo Loreto, Peru; Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1096 (range); idem, Nov. Zool., 28, p. 247, 1921—Yuracares, Bolivia (crit., range); Bangs and Noble, Auk, 35, p. 459, 1918—Pericho, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Idma, Urubamba, Peru; idem, Bull. Amer. Mus. N. H., 55, p. 643, 1926—Zamora and below San José, Ecuador; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 300, 1930—Buena Vista, Santa Cruz, Bolivia (crit.).

*Dacnis cyanater* (not of Lesson) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 21, 1837—Yuracares and "Chiquitos," Bolivia.

*Dacnis cyanocephalus* (not *Molacilla cyanocephala* Gmelin) d'Orbigny, Voy. Amér. Mérid., Ois., p. 221, 1836—Rio Tanampaya (Yungas), Santa Cruz de la Sierra, and Yuracares, Bolivia.

<sup>1</sup> *Dacnis cayana glaucogularis* Berlepsch and Stolzmann: Similar to *D. c. cayana* and about the same size, but black of throat and mantle in adult males less intense, more or less obscured by greenish tips or edges; female not certainly distinguishable. Bolivian males are generally of a more greenish blue coloration, verging toward *D. c. paraguayensis*, but quite similar examples may also be encountered in "Bogotá" and Peru.

*Additional specimens examined*.—Colombia: "Bogotá," 4.—Peru: Nuevo Loreto, 1; La Merced, Chanchamayo, 3; Pozúzo, Huánuco, 3; Chaquimayo, Carabaya, 1.—Bolivia: Simacu, 1; Buenavista, Prov. del Sara, 6.



*Dacnis cayana* (not *Motacilla cayana* Linnaeus) Sclater, Contrib. Orn., p. 106, 1851—part, Peru and Bolivia ("Chiquitos"); idem, Proc. Zool. Soc. Lond., 22, p. 110, 1854—Quijos, Ecuador; idem, l.c., p. 252, 1854—part, Peru and Bolivia; idem, l.c., 26, p. 61, 1858—Rio Napo, Ecuador; idem, l.c., p. 452, 1858—Gualaquiza, Ecuador; idem, Ibis, 1863, p. 313—part, Bolivia and Peru (Chamicuros); Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—lower Ucayali, Peru; idem, l.c., 1867, p. 749—Xeberos, Peru; idem, l.c., p. 977—Pebas, Peru; idem, l.c., 1873, p. 259—part, Peruvian localities (lower Ucayali, Xeberos, Chamicuros, Pebas); idem, l.c., 1879, p. 597—Bolivia (d'Orbigny's localities); Taczanowski, l.c., 1874, p. 510—Monterico, Peru; idem, l.c., 1882, p. 9—Huambo, Peru; idem, Orn. Pér., 1, p. 428, 1884—Peruvian localities; Allen, Bull. Amer. Mus. N. H., 2, p. 80, 1889—Mapiri and Falls of the Madeira, Bolivia.

*Dacnis cayana* subsp. *typica* Sclater, Cat. Bds. Brit. Mus., 11, p. 20, 1886—part, spec. f-j, Pebas, Chamicuros, Sarayacu, Simacu, and Bolivia.

*Dacnis cyanomelas* (not *Fringilla cyanomelas* Gmelin) Berlepsch, Journ. Orn., 37, p. 294, 1889—Tarapoto and Yurimaguas, Peru.

**Range.**—Tropical zone of upper Amazonia, from northern Bolivia through eastern Peru north to eastern Ecuador (?) and southeastern Colombia.

10: Peru (Moyobamba, 2; Vista Alegre, Huánuco, 2; Rio Colorado, Chanchamayo, 1; San Ramón, 1); Bolivia (Buenavista, 4).

**\**Dacnis cayana coerebicolor* Sclater.<sup>1</sup> PURPLE-BLUE DACNIS.**

*Dacnis coerebicolor* Sclater, Contrib. Orn., 1851, pp. 106–112—"New Granada (?)"—Bogotá collections (type in coll. of P. L. Sclater, now in British Museum); idem, Proc. Zool. Soc. Lond., 22, p. 252, 1854—"Nova Grenada"; idem, l.c., 23, p. 137, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 51, 1862—Bogotá; idem, Ibis, 1863, p. 314—Bogotá collections (crit.); Cassin, Proc. Acad. Nat. Sci. Phila., 16, p. 270, 1864—Bogotá; Wyatt, Ibis, 1871, p. 324—Bucaramanga; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 497—Remedios, Antioquia; Berlepsch, Journ. Orn., 32, p. 286, 1884—Bucaramanga; Sclater, Cat. Bds. Brit. Mus., 11, p. 21, pl. 3, 1886—Bogotá and Remedios, Colombia; Hartert, Nov. Zool., 5, p. 481, 1898—Paramba, Ecuador; Goodfellow, Ibis, 1901, p. 318—Santo Domingo, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 87, 1911—Santo Domingo, Ecuador.

<sup>1</sup> *Dacnis cayana coerebicolor* Sclater is the most deeply colored among the races of this group, the male being recognizable by the purplish blue tone of the plumage. The female differs from that of the allied races (*cayana* and *glaucoocularis*) by the much deeper blue color of the top and sides of the head. Birds from the Pacific slope of Colombia and Ecuador are on average paler, and connect the intensely colored Magdalena Valley variety with *D. c. napaea*, of the Santa Marta district, as has been explained by Hellmayr and Chapman. Further subdivision seems, however, unwarranted, since a good many individuals from the two regions are practically indistinguishable.

**Additional specimens examined.**—Colombia: Bucaramanga, 1; "Bogotá," 12; Remedios, Antioquia, 1; Noanamá, 4; Nóvita, 5; Tadó, Rio San Juan, 3; Sipí, Rio Sipí, 3; Jiménez, 16; Rio Oscuro, Cauca, 1.—Ecuador: Paramba, 6; Lita, 2.

*Dacnis cayana coerebicolor* Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1095—Noanamá, Nóvita, Tadó, Sipí, Jiménez, and Río Oscuro, western Colombia (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 584, 1917—Juntas de Tamaná, Nóvita, San José, Barbacoas, Buenavista (Nariño), Puerto Valdivia, near Honda, "Bogotá," and Andalucía, Colombia (crit.); idem, l.c., 55, p. 643, 1926—Esmeraldas, Río de Oro, and Naranjo, Ecuador (crit.).

*Dacnis cayana* (not *Motacilla cayana* Linnaeus) Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Remedios, Antioquia.

**Range.**—Tropical zone of western Ecuador and Colombia, east to the Magdalena Valley, excepting the Santa Marta region.

4: Colombia (Río Bariatou, 2; Jiménez, 1; "Bogotá," 1).

### ***Dacnis cayana napaea* Bangs.<sup>1</sup> SANTA MARTA DACNIS.**

*Dacnis napaea* Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta, Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—Bonda and Cacagualito.

*Dacnis cayana napaea* Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1096—Santa Marta district (crit.).

*Dacnis coerebicolor napaea* Todd and Carriker, Ann. Carnegie Mus., 14, p. 460, 1922—Fundación, Tucurínca, Mamatoco, La Tigrera, Trojas de Cataca, and Don Diego (crit., habits); Darlington, Bull. Mus. Comp. Zool., 71, p. 414, 1931—Río Frio, Magdalena, Colombia.

**Range.**—Lower Tropical zone of northern Colombia, in the Santa Marta region, east to Dibulla, south to Fundación.

### **\**Dacnis cayana ultramarina* Lawrence. ULTRAMARINE DACNIS.**

*Dacnis ultramarina* Lawrence, Proc. Acad. Nat. Sci. Phila., 16, p. 106, 1864—Isthmus of Panama [=Lion Hill, Panama Railroad] (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); Cassin, l.c., p. 269, 1864—Isthmus of Panama (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 180, 1865—Greytown, Nicaragua; idem, l.c., 9, p. 97, 1868—Angostura, Costa Rica; Frantzius, Journ. Orn., 17, p. 297, 1869—Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 185—Chepo, Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 244, 1883—Nicaragua (Chontales, Greytown), Costa Rica (Angostura), and Panama (Chepo and railroad line); Richmond, Proc. U. S. Nat. Mus., 16, p. 487, 1893—Río Escondido, Nicaragua; Bangs, Proc. New Engl. Zool. Cl., 2, p. 28, 1900—Loma del Leon, Panama.

*Dacnis cayana* subsp. *ultramarina* Sclater, Cat. Bds. Brit. Mus., 11, p. 20, 1886—Nicaragua (Chontales), "Veragua," and Panama (Chepo, Lion Hill).

<sup>1</sup> *Dacnis cayana napaea* Bangs: Male intermediate in coloration between *D. c. coerebicolor* and *D. c. ultramarina*, the tone of the plumage being an intense cobalt blue; female not distinguishable in color from *D. c. coerebicolor*; bill decidedly longer than in either of the two races. Wing, 68, (female) 62–64; tail, 45–48; bill, 14–15.

**Material examined.**—Santa Marta: Don Amo, 2; Bonda, 2; Cacagualito, 1.

*Dacnis cayana ultramarina* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 394, 1902—Isthmus of Panama to eastern Nicaragua (monog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 221, 1906—savanna of Panama; Carriker, Ann. Carnegie Mus., 6, p. 821, 1910—Bonilla and El Hogar, Costa Rica; Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1096 (range); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 277, 1918—Gatun, Panama; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 225, 1922—Mount Sapo, Darien; Peters, l.c., 71, p. 339, 1931—Almirante, Panama; Griscom, l.c., 72, p. 367, 1932—Permé and Obaldia, eastern Panama (crit.).

*Dacnis coerebicolor* (not of Sclater) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 291, 1861—Panama Railroad.

*Dacnis cayana* (not *Molacilla cayana* Linnaeus) Salvin, Ibis, 1872, p. 315—Chontales, Nicaragua (crit.).

*Dacnis* sp. Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 339, p. 3, 1899—Punta de Sabana, Darien.

**Range.**—Tropical zone of eastern Nicaragua (Greytown, Rio Escondido, Chontales), eastern Costa Rica, and Panama, practically as far east as the Colombian boundary.<sup>1</sup>

2: Panama.

### \**Dacnis cayana callaina* Bangs.<sup>2</sup> CHIRIQUÍ DACNIS.

*Dacnis cayana callaina* Bangs, Proc. Biol. Soc. Wash., 18, p. 154, 1905—Divala, Chiriquí, Panama (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); idem, l.c., 19, p. 111, 1906—Pózo Azul de Pirris, Costa Rica (crit.); idem, Auk, 24, p. 308, 1907—Boruca and Paso Real, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 820, 1910—El General de Térraba, Pózo Azul de Pirris, and Boruca, Costa Rica (range); Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1096 (range).

*Dacnis cayana* (not *Molacilla cayana* Linnaeus) Salvin, Proc. Zool. Soc. Lond., 1870, p. 185—Mina de Chorchá, Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 244, 1883—part, Panama (Mina de Chorchá).

*Dacnis cayana* subsp. *typica* Sclater, Cat. Bds. Brit. Mus., 11, p. 20, 1886—part, spec. a-c, Volcan de Chiriquí and Bugaba, Chiriquí.

<sup>1</sup> Birds from eastern Costa Rica agree with topotypes from the Canal Zone, while males from Darien, by their more purplish coloration, form the transition to the races of northwestern South America.

**Material examined.**—Costa Rica: Pacuarito, 1; Siquirres, Rio Reventazón, 2.—Panama: Panama, 5; savanna of Panama, 2; Chepo, 1; Mount Sapo, 4.

<sup>2</sup> *Dacnis cayana callaina* Bangs: Very similar to *D. c. glaucogularis*, but on average smaller, with much shorter, slenderer bill, and coloration of males decidedly more greenish blue.

This well-marked form has a very limited range, being restricted to extreme western Panama and western Costa Rica. It is quite distinct from the Ultramarine *Dacnis* of eastern Costa Rica, but closely resembles the widely separated Peruvian race.

**Additional material examined.**—Panama: Bugaba, Chiriquí, 2.—Costa Rica: Pózo Azul de Pirris, 6.

*Dacnis cayana cayana* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 392, 1902—part, Chiriquí.

*Dacnis ultramarina* (not of Lawrence) Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Las Trojas de Puntarenas; Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Térraba, Costa Rica; Bangs, Auk, 18, p. 369, 1901—Divala, Chiriquí.

*Range*.—Tropical zone of western Panama (Chiriquí) and southwestern Costa Rica, north to the Rio Grande de Tárcoles.

2: Costa Rica (Boruca, 1; Térraba Valley, 1).

\**Dacnis lineata* (Gmelin). WHITE-VENTED DACNIS.

*Motacilla lineata* Gmelin,<sup>1</sup> Syst. Nat., 1, (2), p. 990, 1789—based on "Le Pitpit à coiffe bleue" Buffon, Hist. Nat. Ois. (éd. Impr. Roy.), 6, p. 211, 1783; Cayenne.

*C[assicus] d[acnis] tricolor* Merrem, in Ersch and Gruber, Allg. Encycl. Wiss., 15, p. 282, 1826—based on "Pitpit à coiffe bleue" Mauduyt, Enc. Méth., Hist. Nat., Ois., 2, p. 381, 1784; Cayenne.

*Dacnis angelica* (Filippi MS.) Bonaparte, Atti Sesta Riun. Sci. Ital. Milano, p. 404 (note), 1845—Brazil (descr. male; type in Milan Museum); Filippi, Mus. Mediol., Anim. Vertebr., Cl. 2, p. 30, 1847 (crit.); Bonaparte, Consp. Gen. Av., 1, (2), p. 400, 1850 (descr.); Sclater, Contrib. Orn., 1851, p. 107 (diag., crit., range); idem, Proc. Zool. Soc. Lond., 22, p. 110, 1854—Quijos, Ecuador; idem, l.c., p. 252, 1854 (range); idem, l.c., 23, p. 137, 1855—Bogotá (crit.); idem, l.c., 25, p. 263, 1857—Ega, Brazil; idem, l.c., 26, p. 452, 1858—Gualaquiza, Ecuador; idem, Cat. Coll. Amer. Bds., p. 51, 1862—Bogotá; idem, Ibis, 1863, p. 315—New Grenada (crit.); Salvadori, Atti Accad. Sci. Torino, 2, p. 260, 1868 (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 597—Yuracares, Bolivia (ex d'Orbigny); Salvin, Cat. Strickl. Coll., p. 176, 1882—Cayenne; Taczanowski, Orn. Pér., 1, p. 429, 1884—Peru (Ucayali, Xeberos, Chamicuros, Pebas, Monterico, Huambo, Cosnipata, Moyobamba); Salvin, Ibis, 1885, p. 207—Bartica Grove, British Guiana; Sclater, Cat. Bds. Brit. Mus., 11, p. 22, 1886—Cayenne, British Guiana (Bartica Grove, Demerara), Bogotá, Ecuador (Sarayacu, "Intaj"), and Peru (Pebas, Ucayali River); Berlepsch, Zeits. Ges. Orn., 4, p. 184, 1887—Bogotá; Allen, Bull. Amer. Mus. N. H., 2, p. 80, 1889—"Mapiri" and Falls of the Rio Madeira, Bolivia; Berlepsch, Journ. Orn., 37, p. 294, 1889—Tarapoto, Peru; idem and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 337—La Merced, Borgoña, and Garita del Sol, Peru; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No.

<sup>1</sup> *Motacilla lineata* Gmelin is exclusively based upon Buffon's "Pitpit à coiffe bleue" [and Latham's "Blue-striped Warbler" (Gen. Syn. Bds., 2, (2), p. 504), which is merely an English translation of Buffon's account]. Gmelin's description is faulty in various respects, and refers to the white abdominal area as "lutescens," while the two colors on the top and sides of the head are mixed up. Buffon's account, however, cannot well apply to any other species, as has been pointed out by Mr. Zimmer (Field Mus. Nat. Hist., Zool. Ser., 17, p. 423, 1930). Moreover, it is more than probable that Buffon gained his knowledge of the species from Mauduyt, who gives an excellent characterization of the White-vented *Dacnis* under the same vernacular name, viz., "Pitpit à coiffe bleue."

357, p. 12, 1899—Zamora, Ecuador; Berlepsch and Stolzmann, *Ornis*, 13, p. 108, 1906—Huaynapata and Rio Cadena, Peru; Ihering, *Cat. Faun. Braz.*, 1, p. 343, 1907 (range); Snethlage, *Journ. Orn.*, 55, p. 292, 1907—Pará and Rio Purús; Ménégau, *Bull. Soc. Philom. Paris*, (9), 10, p. 92, 1908—upper Napo, Ecuador; Snethlage, *Journ. Orn.*, 56, p. 9, 1908—Antimary, Rio Acre, Brazil; Berlepsch, *Nov. Zool.*, 15, p. 110, 1908—Cayenne; Penard, *Vog. Guyana*, 2, p. 472, 1910—Surinam; Snethlage, *Bol. Mus. Goeldi*, 8, p. 464, 1914—Pará and Rio Acre (Antimary); Chapman, *Bull. Amer. Mus. N. H.*, 36, p. 584, 1917—La Morelia, Caquetá, Colombia; Chubb, *Bds. Brit. Guiana*, 2, p. 478, 1921—Bonasika, Arawai, Arwye Creek, and Bartica, British Guiana; Stone, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 175, 1928—Pará.

*Dacnis melanotis* Strickland, *Contrib. Orn.*, 1851, Part 1, p. 16, Jan., 1851—Cayenne and "Demerara" (crit., excl. Pl. Enl., pl. 669, fig. 1; type, from Cayenne, in Strickland Collection, now in Cambridge (Engl.) University Museum); Sclater, *Cat. Coll. Amer. Bds.*, p. 51, 1862—Cayenne; idem, *Ibis*, 1863, p. 315—Cayenne, Peru (Rio Ucayali), and Bolivia (monog.; excl. Lagôa Santa, Brazil); Cassin, *Proc. Acad. Nat. Sci. Phila.*, 1864, p. 269—Cayenne and Rio Negro; Sclater and Salvin, *Proc. Zool. Soc. Lond.*, 1866, p. 179—upper and lower Ucayali, Peru; idem, *l.c.*, 1867, p. 749—Xeberos, Peru; idem, *l.c.*, 1867, p. 977—Pebas, Peru; idem, *l.c.*, 1873, p. 185—Cosnipata, Dept. Cuzco, Peru; idem, *l.c.*, 1873, p. 259—upper and lower Ucayali, Xeberos, Pebas.

*Dacnis arcangelica* Bonaparte, *Bull. Soc. Linn. Normandie*, 2, p. 31, 1857—new name for *D. angelica* auct. ex Bogotá.<sup>1</sup>

*Dacnis modesta* Cabanis, *Journ. Orn.*, 21, p. 64, 1873—Monterico, Dept. Ayacucho, Peru (descr. female; type in Warsaw Museum; cf. Sztolcman and Domaniewski, *Ann. Zool. Mus. Pol. Hist. Nat.*, 6, p. 179, 1927); Taczanowski, *Proc. Zool. Soc. Lond.*, 1874, p. 510—Monterico; idem, *l.c.*, 1882, p. 9—Huambo, Peru; Berlepsch, *Journ. Orn.*, 37, p. 295, 1889 (crit.).

*Sylvia cayana* (not *Motacilla cayana* Linnaeus) Vieillot and Oudart, *Gal. Ois.*, 1, (2), p. 269, pl. 165 (=male), circa 1824—"en Amérique sous la zone torride."

*Dacnis cayanus* d'Orbigny, *Voy. Amér. Mérid.*, Ois., p. 221, 1836—Yuracares, Bolivia (descr. male); Lafresnaye and d'Orbigny, *Syn. Av.*, 1, in *Mag. Zool.*, 7, cl. 2, p. 20, 1837—Yuracares, Bolivia.

*Dacnis cayana* Cabanis, in Schomburgk, *Reisen Brit. Guiana*, 3, p. 675, "1848"—British Guiana; Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 153, 1856—part, descr. adult male and female; Pelzel, *Orn. Bras.*, 1, p. 25, 1868—Salto do Girão, Rio Madeira, and Engenho do Gama, Matto Grosso; Salvadori, *Atti Accad. Sci. Torino*, 2, p. 261, 1868 (synon.).

*Dacnis angelica melanotis* Hellmayr, *Nov. Zool.*, 12, p. 271, 1905—Igarapé-Assú, Pará.

<sup>1</sup> The author merely says, "*angelica* ex Bogotá, auct., sane diversa." The slightly brighter tinge of the plumage in Colombian examples having been remarked upon by Sclater (*Contrib. Orn.*, 1851, Part 3, p. 108; *Proc. Zool. Soc. Lond.*, 23, p. 137, 1855), Bonaparte's name just escapes being a *nomen nudum*.

*Dacnis angelica angelica* Hellmayr, Nov. Zool., 17, p. 270, 1910—Calama, Rio Madeira (crit.); idem, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 87, 1912—Pará (Pará, Igarapé-Assú, Benevides); idem, Nov. Zool., 28, p. 246, 1921—Cayenne, British Guiana, and Pará district; Beebe, Zoologica (N.Y.), 2, p. 98, 1916—Utinga, Pará.

*Dacnis angelica arcangelica* Hellmayr, Nov. Zool., 28, pp. 246, 247, 1921—upper Amazonia; Chapman, Bull. Amer. Mus. N. H., 55, p. 644, 1926—Zamora, Macas region, Rio Suno, and below San José, eastern Ecuador.

*Dacnis lineata* Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 84, 1918—Javaweg, Surinam (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 422, 1930—Vista Alegre, Huánuco, and Rio Colorado, Chanchamayo, Junín (crit.).

*Dacnis lineata lineata* Naumburg, Bull. Amer. Mus. N. H., 60, p. 363, 1930—Rio Roosevelt (Panda Rapids) and Utiarity, Matto Grosso.

**Range.**—French, Dutch, and British Guiana, and Amazonia, from Pará west to the eastern base of the Andes in southeastern Colombia (Caquetá), Ecuador, and Peru, and south to eastern Bolivia (Falls of the Madeira, Yuracares) and northern Matto Grosso (Rio Roosevelt, Utiarity, Engenho do Gama).<sup>1</sup>

10: Peru (Moyobamba, 1; Nuevo Loreto, 1; Vista Alegre, Huánuco, 4; Rio Colorado, Chanchamayo, Junín, 3); Brazil (Utinga, Pará, 1).

### \**Dacnis lineata egregia* Sclater.<sup>2</sup> YELLOW-VENTED DACNIS.

<sup>1</sup> After examining adequate series of the White-vented *Dacnis* I am bound to concur with Mr. Zimmer's contention that subdivision of the species is impracticable. The alleged difference in the coloration of the females proves to be non-existent, while the slight variation in the blue of the male sex seems altogether too unstable to merit recognition in nomenclature. At all events, specimens from the south side of the Amazon valley (Pará, Caviana, Rio Purús) and from Peru are inseparable from a Guianan series. Males from Tonantins (north bank of the Rio Solimões), Bogotá, and Cuembí, Colombia, are as a rule of a slightly paler and more greenish blue hue, but they are precisely matched by certain individuals from Peru (Nuevo Loreto) and Brazil (Nova Olinda, Rio Purús).

**Material examined.**—French Guiana: Cayenne, 4; Pied Saut, Oyapock, 4; Tamanoir, Mana River, 2.—Brazil: Pará, 1; Igarapé-Assú, 1; Benevides, 2; Utinga, Pará, 1; Caviana, Rio Solimões, 1; Tonantins, Rio Solimões, 3; Calama, 1; Salto do Girão, Rio Madeira, 1; Engenho do Gama, Matto Grosso, 1; Nova Olinda, Rio Purús, 5.—Peru (see above).—Colombia: "Bogotá," 6; Cuembí, Rio Putumayo, 8.

<sup>2</sup> *Dacnis lineata egregia* Sclater differs in the male sex by yellow instead of white under wing, under tail coverts, and abdominal patch, as well as more greenish hue of the blue areas, particularly underneath, while the female is chiefly distinguished by more yellowish abdomen and under wing coverts.

This bird, heretofore treated as a distinct species, is clearly but a geographical representative of the White-vented *Dacnis*, which it replaces west of the eastern Andes in the Tropical zone of the Magdalena and other river valleys of Colombia. It is frequently met with in native Bogotá collections.

**Material examined.**—Colombia: Honda, 4; Remedios, 1; Bucaramanga, 1; "Bogotá," 12.

*Dacnis egregia* Sclater, Proc. Zool. Soc. Lond., 22, "1854," p. 251, pub. April, 1855—"in Nova Grenada"—Bogotá (type in British Museum); idem, l.c., 23, p. 137, 1855—Bogotá; idem, Ibis, 1863, p. 316—part, Bogotá collections; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 497—Remedios and Neche, Antioquia; Berlepsch, Journ. Orn., 32, p. 286, 1884—Bucaramanga (crit.); Sclater, Cat. Bds. Brit. Mus., 11, p. 22, 1886—part, spec. a-f, Bogotá and Remedios, Colombia.

*Dacnis egregia egregia* Chapman, Bull. Amer. Mus. N. H., 36, p. 585, 1917—Honda, Chicoral, and Purificación, Magdalena Valley, Colombia.

*Range*.—Tropical zone of the Magdalena Valley (Honda, Chicoral, Purificación), its tributaries (Rio Lebrija; Remedios, Rio Ité), and the lower Cauca (Rio Neche), Colombia.

4: Colombia (Bogotá, 1; El Tambor, Santander, 2; unspecified, 1).

**\**Dacnis lineata aequatorialis* Berlepsch and Taczanowski.<sup>1</sup>**  
**EQUATORIAL DACNIS.**

*Dacnis egregia aequatorialis* Berlepsch and Taczanowski,<sup>2</sup> Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo, Ecuador (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 179, 1927); Allen, Bull. Amer. Mus. N. H., 2, p. 69, 1889—Ecuador (crit.); Hartert, Nov. Zool., 5, p. 481, 1898—Chimbo; Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 87, 1911—Santo Domingo; Chapman, Bull. Amer. Mus. N. H., 55, p. 644, 1926—Esmeraldas, Rio de Oro, Naránjo, and Rios Coco and Chimbo.

*Dacnis egregia* (not of Sclater, 1855) Sclater, Proc. Zool. Soc. Lond., 28, p. 65, 1860—Pallatanga; idem, l.c., p. 85, 1860—Nanegal; idem, l.c., p. 274, 1860—Babahoyo; idem, l.c., p. 292, 1860—Esmeraldas; idem, Cat. Coll. Amer. Bds., p. 51, pl. 7 (male and female), 1862—Esmeraldas and Nanegal; idem, Ibis, 1863, p. 316—part, western Ecuador (Nanegal, Esmeraldas); Sclater, Cat. Bds. Brit. Mus., 11, p. 22, 1886—part, spec. a-g, "Napo" (errore), Nanegal, and Esmeraldas, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Gualea; Goodfellow, Ibis, 1901, p. 318—Nanegal, Gualea, and Intac.

*Range*.—Tropical zone of western Ecuador, from Esmeraldas south to Chimbo.

2: Ecuador (Puente de Chimbo, 2).

<sup>1</sup> *Dacnis lineata aequatorialis* Berlepsch and Taczanowski: Very similar to *D. l. egregia*, but plumage of male, especially humeral area, rump, and under parts, decidedly more greenish with the under wing coverts and abdominal patch of a richer yellow; female with throat and foreneck more grayish, thus pointing to *D. l. lineata*.

*Material examined*.—Western Ecuador (Chimbo, Nanegal, Gualea, Intac): 12.

<sup>2</sup> [*D. egregia*] *b. aequatorialis* Berlepsch (Journ. Orn., 21, p. 69, 1873) is a nomen nudum.

**Dacnis viguieri** Salvin and Godman.<sup>1</sup> VIGUIER'S DACNIS.

*Dacnis viguieri* (Oustalet MS.) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 246, pl. 15A, fig. 3, 1883—Isthmus of Panama, Darien (type in Paris Museum examined); Sclater, Cat. Bds. Brit. Mus., 11, p. 23, 1886—Isthmus of Darien; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 396, 1902—Isthmus of Panama.

*Range*.—Eastern Panama (Isthmus of Darien).

**Dacnis flaviventer** Lafresnaye and d'Orbigny. YELLOW-BELLIED DACNIS.

*Dacnis flaviventer* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 21, 1837—Yuracares, Bolivia (descr. male and female; types in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 220, pl. 13, fig. 2, 1837—Yuracares, Bolivia; Sclater, Contrib. Orn., 1851, p. 108—Bolivia (Yuracares) and Barra do Rio Negro (diag.); Taczanowski, Orn. Pér., 1, p. 431, 1884—Peru (Ucayali, Sarayacu, Pebas, and Nauta); Hellmayr, Nov. Zool., 14, p. 42, 1907—Teffé, Rio Solimões; Snethlage, Journ. Orn., 56, p. 9, 1908—Bom Lugar and Ponto Alegre, Rio Purús; Hellmayr, Nov. Zool., 17, p. 270, 1910—Calama and Marmellos, Rio Madeira; idem, l.c., 28, p. 248, 1921—Bolivia (note on types); Chapman, Bull. Amer. Mus. N. H., 55, p. 644, 1926—below San José, Ecuador; Naumburg, l.c., 60, p. 364, 1930—Rio Roosevelt (Panda Rapids), Matto Grosso.

*Dacnis flaviventris* Sclater, Proc. Zool. Soc. Lond., 22, p. 252, 1854—Bolivia and Cisandean Peru; idem, l.c., 25, p. 263, 1857—Ega, Rio Solimões, Brazil; idem, Cat. Coll. Amer. Bds., p. 51, 1862—upper Amazon; idem, Ibis, 1863, p. 316—Rio "Jauari" [=Javarri], above Tabatinga, and Yuracares (descr. male); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—Peru; Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper and lower Ucayali and Sarayacu, Peru; idem, l.c., 1867, p. 977—Pebas, Peru; Pelzeln, Orn. Bras., 1, p. 25, 1868—Barra do Rio Negro [=Manãos], Brazil; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 185—Cosnipata, Peru; idem, l.c., 1873, p. 259—Ucayali, Sarayacu, Pebas, and Rio Javarri; idem, l.c., 1879, p. 597—Yuracares, Bolivia; Sclater, Cat. Bds. Brit. Mus., 11, p. 23, 1886—Bolivia, Peru (Ucayali, Pebas, and Iquitos), and Ecuador (Sarayacu); Berlepsch, Journ. Orn., 37, p. 294, 1889—Yurimaguas, Peru; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Zamora, Ecuador; Berlepsch and

<sup>1</sup> *Dacnis viguieri* Salvin and Godman, known only from a single adult male in the Paris Museum, is allied to *D. lineata*, which it resembles in form and proportions, but differs from by various striking characters. While recalling *D. lineata aequatorialis* in its greenish blue general coloration, it lacks the broad black area on the sides of the head, there being but a narrow loreal streak of that color running from the bill to the anterior angle of the eye, and the yellow abdominal patch is altogether absent. Moreover, the upper wing coverts, which are black in all the races of *D. lineata*, are light yellowish green, more greenish blue along the outer web, only the smallest being basally black with greenish blue tips; the axillars and under wing coverts soiled grayish, not pure white as in *D. l. lineata* or bright yellow as in *D. l. egregia* and *D. l. aequatorialis*; the under tail coverts dull greenish yellow, broadly margined with greenish blue. Wing, 58; tail, 38.



Hartert, Nov. Zool., 9, p. 16, 1902—Nicare, Caura River, Venezuela; Ihering, Rev. Mus. Paul., 6, p. 432, 1905—Rio Juruá, Brazil; idem, Cat. Faun. Braz., 1, p. 343, 1907—Rio Juruá, Snethlage, Journ. Orn., 56, p. 498, 1908—Goyana, Rio Tapajóz; idem, Bol. Mus. Goeldi, 8, p. 464, 1914—Rio Iriri (Santa Julia), Rio Tapajóz (Goyana), Rio Jamauchim (Santa Elena), and Rio Purús (Bom Lugar, Ponto Alegre); Cherrie, Mus. Brookl. Inst., Sci. Bull., 2, p. 165, 1916—Nicare, Caura, Venezuela.

**Range.**—Upper Amazonia, from the eastern base of the eastern Andes of Colombia south through Ecuador and Peru to northern Bolivia (Yuracares; Rio San Mateo) and northern Matto Grosso (Rio Roosevelt), east to Venezuela (Nicare, Caura Valley) and northern Brazil (Manáos and Rio Tapajóz).<sup>1</sup>

### **Dacnis nigripes** Pelzeln.<sup>2</sup> BLACK-LEGGED DACNIS.

*Dacnis nigripes* Pelzeln, Sitzungsber. Akad. Wiss. Wien, Math.-Naturw. Cl., 20, (1), p. 154, pl. 1, figs. 1 (male), 2 (female), 1856—"Nuovo" [=Nova] Friburgo, Proc. Rio de Janeiro (types in Vienna Museum examined); Sclater, Proc. Zool. Soc. Lond., 25, p. 263, 1857—Brazil (crit.); idem, Cat. Coll. Amer. Bds., p. 51, 1862—Brazil; idem, Ibis, 1863, p. 314—Nova Friburgo (crit.); Pelzeln, Orn. Bras., 1, p. 25 (note), 1868—Nova Friburgo; Berlepsch, Journ. Orn., 21, pp. 69, 237, 1873—Nova Friburgo, Lagôa Santa (Minas Geraes), and Blumenau (Santa Catharina) (crit.); Sclater, Cat. Bds. Brit. Mus., 11, p. 21, 1886—Brazil; Ihering and Ihering, Cat. Faun. Braz., 1, p. 343, 1907 (range).

*Dacnis cayana* (not *Motacilla cayana* Linnaeus) Burmeister, Syst. Uebers. Th. Bras., 3, p. 153, 1856—part, Lagôa Santa, Minas Geraes (descr. male juv.; spec. in Halle Museum examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 437—Lagôa Santa (ex Burmeister).

<sup>1</sup> I have not been able to discern any geographical variation among specimens of this widespread species from different localities.

**Material examined.**—Venezuela: Nicare, Caura River, 1 (adult male).—Colombia: "Bogotá," 5.—Ecuador: Sarayacu, 1.—Peru: Samiria, 1; Iquitos, 1; Rio Ucayali, 1.—Bolivia: San Mateo, 1 (adult male); Yuracares, 3.—Brazil: Manáos, 4; Teffé, Rio Solimões, 2; Marmellos, Rio Madeira, 1; Calama, Rio Madeira, 3; Santa Izabel, Rio Preto, 2; Rio Juruá, 1.

<sup>2</sup> *Dacnis nigripes* Pelzeln, a very distinct species, superficially resembles *D. cayana* in the male sex, but has a proportionately much shorter tail, a considerably stouter, basally much wider bill, and differs also in some details of coloration. The black dorsal area is much less extensive, being confined to the upper back; the black gular patch is likewise more restricted and distinctly rounded on its posterior margin; the rectrices, particularly the two median pairs, are conspicuously edged with blue on the apical half of both webs; the legs and feet are dusky or blackish instead of brownish or reddish flesh color. The female has no resemblance at all to *D. cayana*, but is closely similar to that of *D. venusta*, from which it differs chiefly by distinctly dusky brownish upper back and more buffy (less whitish) throat. Wing, 60–62, (female) 59–62; tail, 34–38; bill, 11–12.

*D. nigripes* lives side by side with *D. cayana paraguayensis* in certain parts of southeastern Brazil, and there can be no doubt as to its specific distinctness.

**Material examined.**—Minas Geraes: Lagôa Santa, 1.—Rio de Janeiro: Nova Friburgo, 7 (including the types); Rio de Janeiro, 4.—Santa Catharina: Blumenau, 1; Joinville, 1.

*Range*.—Wooded region of southeastern Brazil, in states of Minas Geraes (Lagôa Santa), Rio de Janeiro (Nova Friburgo),<sup>1</sup> and Santa Catharina (Blumenau, Joinville).

**\**Dacnis venusta venusta* Lawrence. SCARLET-THIGHED DACNIS.**

*Dacnis venusta* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 464, 1862—Panama Railroad (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); Sclater, Ibis, 1863, p. 315, pl. 7 (male, female)—Isthmus of Panama; Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 348—Panama Railroad; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 269—Panama; Salvadori, Atti Accad. Sci. Torino, 4, p. 172, 1868—Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 97, 1868—Dota Mountains, Costa Rica; Frantzius, Journ. Orn., 17, p. 297, 1869—Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 185—Bugaba, Chiriquí; Boucard, l.c., 1878, p. 54—Candelaria, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 245, 1883—part, Costa Rica (Dota Mountains, Tucurriquí) and Panama (Bugaba, Panama Railroad); Ridgway, Proc. U. S. Nat. Mus., 6, p. 414, 1883—Cervántes, Costa Rica; Sclater, Cat. Bds. Brit. Mus., 11, p. 24, 1886—part, spec. a-j, Tucurriquí, Volcan de Chiriquí, Bugaba, Panama; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Naránjo de Cartago, Birris, and Monte Redondo de San José, Costa Rica; Cherrie, Proc. U. S. Nat. Mus., 14, p. 529, 1891—Costa Rica (descr. juv.); idem, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Boruca, Costa Rica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 396, 1902—part, Costa Rica and Panama (monog., full bibliog.); Bangs, Proc. New Engl. Zool. Cl., 3, p. 63, 1902—Boquete, Chiriquí; idem, Auk, 24, p. 308, 1907—Boruca, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 819, 1910—Costa Rica (range, habits); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 275, 1910—Guayábo, Costa Rica; Moller, Zeits. Mikr.-Anat. Forsch., 28, p. 395, 1932 (tongue).

*Dacnis* sp. Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 319, 1861—Panama Railroad.

*Range*.—Tropical zone of Costa Rica and western Panama, east to the Canal Zone.<sup>2</sup>

7: Costa Rica (Guayábo, 1; Santa Cruz de Turrialba, 1; Turrialba, 2; Boruca, 1; Peralta, 1; unspecified, 1).

**\**Dacnis venusta fuliginata* Bangs.<sup>3</sup> COLOMBIAN SCARLET-THIGHED DACNIS.**

<sup>1</sup> Not yet recorded from either São Paulo or Paraná, where it doubtless also occurs.

<sup>2</sup> Specimens from the Canal Zone agree in coloration with a series from Chiriquí and Costa Rica, but resemble *D. v. fuliginata* in their smaller size.

*Additional material examined*.—Costa Rica: Candelaria, 2; unspecified, 1.—Panama: Boquete, Chiriquí, 6; El Banco, Chiriquí, 1; Panama Railroad, 3.

<sup>3</sup> *Dacnis venusta fuliginata* Bangs: Male similar to *D. v. venusta*, but under parts much darker, deep black with just a faint greenish tinge on the flanks only;

*Dacnis venusta fuliginata* Bangs, Proc. Biol. Soc. Wash., 21, p. 160, 1908—Jiménez, western Andes, Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1094—Noanamá, Nóvita, Jiménez, and Rio Dagua, Colombia (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 585, 1917—Bagado, Noanamá, Barbacoas, and Puerto Valdivia (lower Cauca), Colombia; idem, l.c., 55, p. 645, 1926—northwestern Ecuador; Griscom, Bull. Mus. Comp. Zool., 72, p. 367, 1932—Permé and Obaldia, eastern Panama.

*Dacnis venusta* (not of Lawrence) Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 497—Remedios, Rio Ité, Antioquia; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 245, 1883—part, Remedios, Colombia; Sclater, Cat. Bds. Brit. Mus., 11, p. 24, 1886—part, spec. k, Remedios, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 396, 1902—part, Remedios.

**Range.**—Tropical zone of northwestern Ecuador and Pacific Colombia, extending east to Antioquia (Puerto Valdivia, lower Cauca; Remedios, Rio Ité) and north to extreme eastern Panama (Caribbean side of Darien).

1: Colombia (Tadó, Rio San Juan, Choco, 1).

### ***Dacnis berlepschi* Hartert.<sup>1</sup> BERLEPSCH'S DACNIS.**

*Dacnis berlepschi* Hartert, Bull. Brit. Orn. Cl., 11, p. 37, 1900—Lita, northwestern Ecuador (descr. female; type in Tring Museum examined);

female with lower belly and under tail coverts rather deeper buffy yellow. Wing, 62–65, (female) 60–64; tail, 39–42; bill, 10–11.

Three specimens from Paramba, Ecuador, in the Vienna Museum are identical with a series from the Pacific coast of Colombia. A single male from Remedios is slightly tinged with greenish below, thus forming the passage to the typical race. Birds from Darien are stated by Griscom to be intermediate to *D. v. venusta*.

**Material examined.**—Ecuador, Prov. Imbabura: Paramba (alt. 3,500 ft.), 3.—Colombia: Rio Dagua, 2; Jiménez, 4; Nóvita, 2; Noanamá, 1; Remedios, 1.

<sup>1</sup> *Dacnis berlepschi* Hartert.—Adult male: top and sides of the head deep dull violaceous blue, throat and chest somewhat lighter, about grayish violaceous blue, the basal portion of the feathers of all these parts deep black, this color showing through here and there; dorsal feathers and scapulars dull blue, mesially streaked with shining light squill blue, more broadly so on the rump, the blue apical portion being separated from the dark gray base by a broad black sub-terminal band; smaller upper wing coverts black at base, tipped with deep dull violaceous blue, the median series again apically streaked with light squill blue; greater wing coverts black, externally lily green fringed with bluish; primary coverts and alula black, narrowly edged with violaceous blue; remiges and rectrices black, externally margined with lily green or artemisia green; breast flame-scarlet; abdomen orange-buff, tinged with grayish on the flanks; under tail coverts paler buff; axillars and under wing coverts white. Female: Brussels brown above, duller and more Prout's brown on the pileum, and more cinnamonaceous on the rump; wings and tail dusky, margined with the color of the back; throat and chest much paler, light Dresden brown; the red pectoral area much less extensive and paler, orange chrome; the abdomen and under tail coverts buckthorn brown; axillars and under wing coverts light buff. Bill black, feet dusky gray. Wing, 66, (female) 61; tail, 50, (female) 46; bill, 11.

A very distinct species with no near relative.

**Material examined.**—Ecuador: Carondelet, 4.

Rothschild, l.c., 11, p. 44, 1900 (note on adult male); Hartert, Nov. Zool., 8, p. 371, pl. 5, figs. 1, 2 (male, female), 1901—Lita, Carondelet, and San Javier, Ecuador (descr. male and female); Chapman, Bull. Amer. Mus. N. H., 55, p. 645, 1926—Lita, Ecuador.

*Range*.—Tropical zone of northwestern Ecuador, in provinces of Esmeraldas (Carondelet, San Javier) and Imbabura (Lita).

### Genus HEMIDACNIS Sclater

*Hemidacnis* Sclater, Cat. Coll. Amer. Bds., p. 50, 1862—type, by monotypy, *Pipraeidea albiventris* Sclater.

#### *Hemidacnis albiventris* (Sclater). WHITE-VENTED DACNIS.

*Pipraeidea albiventris* Sclater, Rev. Mag. Zool., (2), 4, p. 8, 1852—"Nouvelle Grenade"—Bogotá, Colombia (descr. male; type in Paris Museum); idem, Contrib. Orn., 1852, p. 131, pl. 100, fig. 2 (reprint; fig. of type).

*Diva albiventris* Sclater, Proc. Zool. Soc. Lond., 23, p. 158, 1855—Bogotá.

*Hemidacnis albiventris* Sclater, Cat. Coll. Amer. Bds., p. 50, 1862—Bogotá; Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 749—Xeberos, Peru; idem, l.c., 1873, p. 259—Xeberos and Chamicuros, Peru; Taczanowski, Orn. Pér., 1, p. 427, 1884—Xeberos and Chamicuros; Sclater, Cat. Bds. Brit. Mus., 11, p. 17, 1886—Peru (Chamicuros, Xeberos), Ecuador (Sarayacu), and Colombia (Bogotá); Chapman, Bull. Amer. Mus. N. H., 55, p. 643, 1926—eastern Ecuador.

*Dacnis albiventris* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271—Bogotá; Berlepsch, Journ. Orn., 21, p. 69, 1873—Bogotá and northern Peru.

*Range*.—Tropical zone of eastern Colombia (not rare in native "Bogotá" collections), eastern Ecuador (Sarayacu), and north-eastern Peru (Iquitos; Xeberos; Chamicuros).<sup>1</sup>

### Genus XENODACNIS Cabanis

*Xenodacnis* Cabanis, Journ. Orn., 21, p. 311, 1873—type, by orig. desig., *Xenodacnis parina* Cabanis.

#### *Xenodacnis parina* Cabanis. TIT-LIKE DACNIS.

*Xenodacnis parina* Cabanis, Journ. Orn., 21, p. 312, pl. 4, figs. 1, 2, 1873—Monterico, Dept. Ayacucho, Peru (types in Berlin Museum); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 510—Monterico; idem, Orn. Pér., 1,

<sup>1</sup> A single adult male from Peru (Iquitos) does not differ in coloration, but has a smaller (both shorter and slenderer) bill than Bogotá specimens. The type of this peculiar species was sent to the Paris Museum by Mr. Lévy in a collection of native "Bogotá" skins. Within the boundaries of Colombia, this bird has not been recorded from any definite locality, but from its occurrence in the Tropical zone of eastern Ecuador and northern Peru it may be inferred that the "Bogotá" skins originated from the Amazonian lowlands at the foot of the eastern Andes of Colombia.

*Material examined*.—Colombia: "Bogotá," 16.—Peru: Iquitos, 1.

p. 434, 1884—Maraynioc; Sclater, Cat. Bds. Brit. Mus., 11, p. 17, 1886—Maraynioc; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 336—Maraynioc; Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Matchu Picchu and Idma Pampa, Urubamba, Peru.

*Range*.—Temperate zone of southern Peru, in depts. of Junín (Maraynioc), Ayacucho (Monterico), and Cuzco (Anta, Matchu Picchu, Idma Pampa).<sup>1</sup>

### Genus COEREBA Vieillot<sup>2</sup>

*Coereba* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, "1807," p. 70, 1808 [possibly 1809]—type, by monotypy, *Certhia flaveola* Linnaeus.

*Certhiola* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 1835, p. 99, 1836—type, by monotypy, *Certhia flaveola* Linnaeus.

*Arbelorhina* Cabanis, Arch. Naturg., 13, (1), p. 325, 1847—new name for *Coereba* Vieillot.

### \**Coereba flaveola chloropyga* (Cabanis). BRAZILIAN BANANAQUIT.

*Certhiola chloropyga* Cabanis, Mus. Hein., 1, p. 97, 1851—Bahia (type in Heine Collection, now in the Municipal Museum at Halberstadt); Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—Brazil; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272—Brazil; Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Rio de Janeiro and São Paulo (Ypanema); Sundevall, Ofvers. Vetensk.-Akad. Förh., 26, p. 624, 1869—Brazil (monog.); Reinhardt, Vidensk. Medd. Naturhist. Foren., p. 434, 1870—Minas Geraes (Lagôa Santa, Uberaba), Goyaz (Catalão), São Paulo (Hytú), and Rio de Janeiro (Macahé); Hamilton, Ibis, 1871, p. 302—São Paulo; Finsch, Verhändl. Zool. Bot. Ges. Wien, 21, p. 41, 1871—part, eastern Brazil (from Bahia south) and eastern Peru (Ucayali); Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 185—San Antonio, Peru; Berlepsch, Journ. Orn., 21, p. 239, 1873—Blumenau, Santa Catharina; Cabanis, l.c., 22, p. 84, 1874—Cantagallo; Forbes, Ibis, 1881, p. 330—Pernambuco; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 117, 1885—Taquara and Arroio Grande, Rio Grande do Sul; Sclater, Cat. Bds. Brit. Mus., 11, p. 44, 1886—part, spec. p, q, t-h', Brazil (Pará, Pernambuco, Bahia, Rio Grande do Sul, "Rio Claro, Goyaz") and Bolivia (Baganti); Allen, Bull. Amer. Mus. N. H., 2, p. 81, 1889—Mapiri, Bolivia; Ihering, Ann. Est. Rio Grande

<sup>1</sup> *Material examined*.—Peru: Maraynioc, Junín, 2; Anta, Cuzco, 14.

<sup>2</sup> Thorough study of large series of nearly every described form has led to the conclusion that the numerous "species" from the West Indies and continental America are merely representative races of a single taxonomic entity. Two "species," *C. caboti* and *C. ferryi*, being decidedly intermediate between the West Indian group and the mainland forms, there is no alternative but to unite the whole assemblage under one specific title. The blackish varieties, at one time considered to be specifically distinct, are in the author's judgment melanotic mutants, this being clearly indicated by the presence of a more or less perceptible olivaceous tinge on those parts of the plumage which are yellow in the normally colored forms.

do Sul, 16, p. 118, 1899—Mundo Novo; idem, Rev. Mus. Paul., 3, p. 142, 1899—Iguapé, São Paulo; idem, l.c., 4, p. 152, 1900—Cantagallo; Snethlage, Journ. Orn., 55, p. 292, 1907—part, Pará, Maguary, and Santo Antonio do Prata (nest descr.); Holmberg, Apunt. Hist. Nat., 1, p. 123, 1909—Misiones.

*Certhiola brasiliensis* (Sclater MS.) Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 259, 1854—locality not stated;<sup>1</sup> idem, Not. Orn. Coll. Delattre, p. 51, 1854 (reprint of orig. descr.).

*Certhiola majuscula* Cabanis, Journ. Orn., 13, p. 413, 1865—"von Montevideo und den südlichsten Strichen Brasiliens" (type, from Villa Guaratinguetá, São Paulo,<sup>2</sup> in Berlin Museum examined); Sundevall, Ofvers. Vetensk.-Akad. Handl., 26, p. 624, 1869 (ex Cabanis).

*Certhiola palmarum* Bertoni, Anal. Cient. Parag., 1, p. 144, Jan., 1901—Alto Paraná, Paraguay (type in coll. of A. de W. Bertoni).

*Coereba chloropyga* Riker and Chapman, Auk, 7, p. 266, 1890—Santarém; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 337—La Merced, Chanchamayo, Peru; Hellmayr, Nov. Zool., 12, p. 272, 1905—Igarapé-Assú and Bemfica, Pará (range); idem, l.c., 13, p. 356, 1906—Santo Antonio do Prata, Pará; idem, l.c., 14, p. 6, 1907—Urucurituba, Rio Tapajóz; Ihering, Cat. Faun. Braz., 1, p. 345, 1907—São Paulo (Ypiranga, Cachoeira, Bebedouro, Alto da Serra, Ubatuba, Avanhandava, Tieté, Piquete, Iguapé), Minas Geraes (Vargem Alegre), Pará (Santarém), and Rio Grande do Sul (Novo Hamburgo); Snethlage, Journ. Orn., 56, pp. 498, 522, 1908—Goyana, Rio Tapajóz, and Arumatheua, Rio Tocantins; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 86, 1910—Bahia (Barra, Barra do Rio Grande, and Porto da Pedra, Rio Preto) and Piahy (Lagõa Missão, Parnaguá); Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 371, 1910—Alto Paraná, Paraguay; Lowe, Ibis, 1912, p. 504—Pará to Minas Geraes (crit.); Bertoni, Anal. Soc. Cient. Arg., 75, p. 98, 1913—Iguazú, Misiones; Dabbene, Bol. Soc. Physis, 1, p. 360, 1914—Paraguay and Misiones (Santa Ana, Iguazú); Snethlage, Bol. Mus. Goeldi, 8, p. 467, 1914—part, Pará, Ananindeua, Quati-purú, Santo Antonio do Prata, Rio Tocantins (Cametá, Arumatheua), Rio Xingú (Forte Ambé), Rio Tapajóz (Boim, Goyana), and Rio Jamauchim (Conceição); idem, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, pp. 41, 60, 1926—Ceará and Maranhão (Anil, Tury-assú); Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 175, 1928—Castanhal, Pará.

*Coereba chloropyga chloropyga* Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 7, 87, 1912—Peixe-Boi and Ipitinga (Pará localities); Beebe, Zoologica (N.Y.), 2, p. 97, 1916—Utinga, Pará; Holt, Bull. Amer. Mus. N. H., 57, p. 319, 1928—Bemfica and Monte Serrat,

<sup>1</sup> Bonaparte's description is misleading in various respects (cf. "nigricans; gula atra"), but Slater (Cat. Coll. Amer. Bds., p. 53, 1862), who ought to have known what he understood by his unpublished MS. name, gives it as a synonym of *C. chloropyga*.

<sup>2</sup> Guaratinguetá is a town in the eastern section of São Paulo, district of Taubaté, and not in Rio Grande do Sul, as erroneously stated by Lowe (Ibis, 1912, p. 505).

Serra do Itatiaya; Naumburg, Bull. Amer. Mus. N. H., 60, p. 362, 1930—Campos Novos and Utiarity, northern Matto Grosso.

*Coereba luteola chloropyga* Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 270, 1929—Maranhão (São Luiz, Barra do Corda) and Ceará (Varzea Formosa, Serra de Baturité); Zimmer, l.c., 17, p. 415, 1930—Chinchao, Vista Alegre, and Huachipa, Huánuco, Peru (crit.).

*Coereba chloropyga majuscula* Lowe, Ibis, 1912, p. 505, pl. 8, fig. 1—São Paulo to Rio Grande do Sul (crit.).

*Coereba flaveola* (not *Certhia flaveola* Linnaeus) Wied, Beitr. Naturg. Bras., 3, (2), p. 774, 1831—eastern Brazil; Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 24, 1838—Guarayos, Bolivia (spec. examined).

*Certhiola flaveola* Tschudi, Arch. Naturg., 10, (1), p. 294, 1844—Peru; idem, Faun. Peru., Aves, p. 237, 1846—eastern Peru; Burmeister, Syst. Uebers. Th. Bras., 3, p. 155, 1856—Nova Friburgo (Rio de Janeiro) and Lagôa Santa (Minas Geraes); Euler, Journ. Orn., 15, p. 406, 1867 (nest descr.).

(?) *Certhiola luteola* (not of Cabanis) Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper and lower Ucayali, Peru; idem, l.c., 1873, p. 260—same localities; Taczanowski, Orn. Pér., 1, p. 442, 1884—part (descr. of young from Sarayacu).

*Certhiola mexicana* (not of Sclater) Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 597—Guarayos (ex d'Orbigny), Tilotilo, and Baganti, Bolivia.

*Certhiola peruviana* (not of Cabanis<sup>1</sup>) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 512—Paltaypampa, Chanchamayo, Peru (nest descr.); idem, Orn. Pér., 1, p. 439, 1884—part, Paltaypampa.

**Range.**—Brazil south of the Amazon, from Pará west to the Tapajóz, and south to northern Matto Grosso (Campos Novos, Utiarity), and through the eastern states to Rio Grande do Sul and the adjacent parts of Paraguay (Alto Paraná) and Argentina

<sup>1</sup> *Certhiola peruviana* Cabanis (Journ. Orn., 13, p. 413, 1865), based on a single specimen collected by Warscewicz somewhere in Peru, cannot be satisfactorily determined. It is described as similar to "*C. majuscula*" (that is, São Paulo specimens of *C. chloropyga*), but differing by the presence of a white alar speculum. This diagnosis answers fairly well to the characters of *C. f. intermedia*, which we have (in a rather long-billed variety) from Moyobamba in northern Peru. While I have no detailed information as to Warscewicz's itinerary, it is an established fact that this naturalist visited northern Peru, where, among other novelties, he discovered *Coeligena warscewiczii* Reichb. [= *Diphogena aurora* (Gould)], a humming-bird more or less restricted to the Chota region in the upper Marañon Valley. The Bananaquit occurring in that particular region is *C. magnirostris*, which, though also marked with a small white wing-spot, is nevertheless distinguished from *intermedia* by paler grayish back, lighter gray throat, and paler yellow breast. If Cabanis had had that bird before him, he would hardly have described his *C. peruviana* as exactly like "*majuscula*," but with a white alar speculum. Unfortunately, as we learn from Finsch (Verhandl. Zool. Bot. Gesells. Wien, 21, 1871, p. 778, *passim*), the type specimen, which had a broken bill, was rejected by the Berlin Museum as unsuitable for purchase, and its present location is unknown.

(Iguazú and Santa Ana, Misiones); also eastern Bolivia and eastern Peru, north to Junín (Chanchamayo) and Huánuco.<sup>1</sup>

<sup>1</sup> Further subdivision of the Brazilian Bananaquit appears to be impracticable. P. R. Lowe attempted to revive Cabanis's name *majuscula* for a supposedly larger and paler form representing typical *chloropyga* in extreme southeastern Brazil from São Paulo southward. With a much larger series from the disputed region, whence Dr. Lowe had only five specimens, we are unable to substantiate any color differences between birds from the south and others from Bahia and northwards, neither the color of the throat nor that of the upper parts affording reliable criteria for such a distinction. All that can be said is that there is a certain tendency to slight increase in size, as we advance in a southerly direction, but this variation is too insignificant to be expressed in nomenclature, as the table of measurements given below clearly shows. Birds from Peru and Bolivia seem to me also inseparable, though they generally have the crown darker (less brownish), the back more grayish, and the rump on average more greenish. Exceptions are, however, too frequent to justify segregation. This is more surprising as their range is separated from the Brazilian area of this form by interposition of *C. f. alleni*, of Matto Grosso. In size of bill, Peurvian examples sometimes approach *C. f. magnirostris*.

*Additional material examined.*—Brazil, Pará: Urucurituba, Rio Tapajóz, 1; Santo Antonio do Prata, 4; Igarapé-Assú, 1; Bemfica, 1; Ourém, Rio Guamá, 1; Peixe-Boi, 1; Ipitanga, Rio Acará, 1.—Maranhão: Miritiba, 5.—Piauí: Lagôa Missão, Parnaíba, 1.—Bahia: Porto da Pedra, Rio Preto, 1; Lamarão, 1; Bahia City, 15.—Espírito Santo: Braço do Sul, Vitória, 1.—Rio de Janeiro: Rio de Janeiro, 5; Manguinhos, 1.—Goyaz: Goyaz, 1.—Minas Geraes: Agua Suja, near Bagagem, 2.—São Paulo: Guaratinguetá, 1; Faxina, 1; Ypanema, 2; São Sebastião, 3; Vitória, 1.—Santa Catharina: Joinville, 2; Blumenau, 6.—Rio Grande do Sul: Taquara do Mundo Novo, 1; Camaquã, 1.—Bolivia: Guayayos, 1; Baganti, 1; Omeja, Yungas, 2.—Peru: Chanchamayo, Dept. Junín, 1.

#### MEASUREMENTS

Adult males	Wing	Tail	Bill
Two from Bolivia.....	60, 61	38, 40	12, 12
One from Chanchamayo, Peru.....	61	40	13½
Six from Huánuco, Peru.....	58-63	35-38	13-14
One from Rio Grande do Sul.....	58	41	12
Four from Santa Catharina.....	58-60	38-40	12-13
Four from São Paulo.....	57-61	36-39	12-13
One from Guaratinguetá, São Paulo (type of <i>C. majuscula</i> ).....	62	38	[damaged]
One from Rio de Janeiro.....	59	38	13
Five from Minas Geraes.....	59-62	38-40	12-13
One from Rio do Peixe, Bahia.....	60	37	13
One from Rio Preto, Bahia.....	58	37	12½
Eight from Bahia City.....	56-59	36-40	11½-12½
Two from Ceará.....	58, 59	36, 38	12, 13
Three from Maranhão.....	57-58	36-38	12, 12, 12
Four from Pará.....	55-58	33-36	11-12½
Adult females			
Two from Bolivia.....	53, 57	30, 36	12, 12
Three from Huánuco, Peru.....	55, 55, 56	31, 33, 34	13, 13½, —
Four from Santa Catharina.....	54-57	33-37	11-12
Two from São Paulo.....	55, 56	34, 38	12, 13
Three from Rio de Janeiro.....	54-56	34-36	12, 12, 12
One from Espírito Santo.....	55	35	12
One from Goyaz.....	53	31	12
Six from Bahia.....	51-55	32-36	11-12
One from Piauí.....	55	35	12
Three from Maranhão.....	53-55	30-34	11-12
Seven from Pará.....	51-54	28-32	11-12
One from Rio Tapajóz.....	53	30	11½



29: Brazil (Pará, 2; São Luiz, Maranhão, 3; Barra do Corda, Maranhão, 1; Varzea Formosa, Ceará, 1; Serra do Baturité, Ceará, 1; Rio do Peixe, near Queimadas, Bahia, 1; Bahia, 1; Rio das Velhas, near Lagoa Santa, Minas Geraes, 3; Baurú, São Paulo, 1; Joinville, Santa Catharina, 2); Bolivia (Buenavista, Santa Cruz, 1); Peru (Chinchao, 6; Huachipa, 2; Vista Alegre, 4).

**\*Coereba flaveola alleni** Lowe.<sup>1</sup> ALLEN'S BANANAQUIT.

*Coereba chloropyga alleni* Lowe, Bull. Brit. Orn. Cl., 29, p. 86, 1912—Chapada, Matto Grosso (type in British Museum); idem, Ibis, 1912, p. 506—Chapada district, Matto Grosso (crit.); Ménégau, Rev. Franç. d'Orn., 5, p. 86, 1917—Poconé and [São Luiz de] Cáceres, Matto Grosso; Naumburg, Bull. Amer. Mus. N. H., 60, p. 362, 1930—southern Matto Grosso (crit.).

*Coereba chloropyga* (not *Certhiola chloropyga* Cabanis) Allen, Bull. Amer. Mus. N. H., 3, p. 348, 1892—Abrilongo, Cuyabá, and Chapada, Matto Grosso.

*Range*.—Plateau of Matto Grosso (Cuyabá, Chapada, Abrilongo, São Luiz de Cáceres, Poconé) in central Brazil.

5: Brazil, Matto Grosso (Chapada, 5).

**\*Coereba flaveola minima** (Bonaparte).<sup>2</sup> CAYENNE BANANAQUIT.

<sup>1</sup> *Coereba flaveola alleni* Lowe: Closely similar to *C. f. chloropyga*, but upper parts paler, less grayish; the back light brownish olive, the crown dusky rather than blackish; the rump duller, pyrite yellow rather than sulphine yellow; the throat generally of a paler gray. Wing, 60–63, (female) 55–58; tail, 38–40, (female) 32–37; bill, 12–13.

Although every one of the subspecific characters is to be found in occasional individuals of *chloropyga*, the Matto Grosso form, when compared in a series, stands out as a fairly well-marked unit. The range of *C. alleni* is peculiarly restricted, since birds from Bolivia and southern Peru, as we have shown under the preceding heading, are obviously inseparable from *chloropyga*.

*Additional material examined*.—Matto Grosso: Abrilongo, 1; Chapada, 12.

<sup>2</sup> *Coereba flaveola minima* (Bonaparte): Nearest to *C. f. chloropyga*, but upper parts decidedly darker, more sooty, and the rump much brighter yellow; similar also to *C. f. guianensis*, but not quite so dark above, with the rump somewhat duller. Wing, 56–61, (female) 50–55; tail, 34–37, (female) 28–33; bill, 11–13.

Although exactly intermediate between *guianensis* and *chloropyga*, this form cannot well be united to either of the two. While the majority of the individuals from the area above circumscribed occupy an intermediate position, the darkest examples are distinguishable from *guianensis* only by their duller (not lemon chrome) rump. On the other hand, certain unusually dark-backed birds of *chloropyga* from the Pará region are also barely separable. The throat is mostly pale gray as in *chloropyga*, but several skins from French Guiana and one from Counany are just as dark-throated as any *guianensis*. Two adults from the Rio Negro, by having a small white alar speculum, betray an unmistakable variation towards *C. f. intermedia*. In all the rest of the series there is no trace of it.

*Additional material examined*.—French Guiana: Cayenne (the type), 1; Isle Le Père, 5; Ipousin, Approuague River, 2; Saint-Jean-du-Maroni, 1.—Dutch Guiana: vicinity of Paramaribo, 4.—Brazil: Cachoeira, Marajó, 2; Lamalonga, Rio Negro, 1; Marabitanas, Rio Negro, 1.

*Certhiola minima* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 259, 1854—Cayenne (type in Paris Museum examined); idem, Not. Orn. Coll. Delattre, p. 51, 1854 (reprint of orig. descr.); Sundevall, Ofvers. Vetensk.-Akad. Handl., 26, p. 625, 1869 (ex Bonaparte).

*Coereba chloropyga cayennensis* Lowe, Ibis, (9), 6, p. 506, 1912—Oyapock, Cayenne (type in British Museum).

*Certhiola chloropyga* (not of Cabanis) Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 570—Mexiana and Cobati, Rio Negro; Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Lamalonga and Marabitanas, Rio Negro (spec. examined); Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 779, 1871—part, Cayenne, Surinam, and Mexiana; Sclater, Cat. Bds. Brit. Mus., 11, p. 44, 1886—part, spec. l-o, r, Oyapock, Cayenne, Cobati (Rio Negro), and Island of Mexiana; Ménégau, Bull. Mus. Hist. Nat. Paris, 10, p. 116, 1904—Camopi and Ilot la Mère, French Guiana; Hagmann, Zool. Jahrb. (Syst.), 26, p. 26, 1907—Mexiana; Snethlage, Journ. Orn., 55, p. 292, 1907—part, Maracá, Mexiana, and Monte Alegre; Penard and Penard, Vog. Guyana, 2, p. 477, 1910—Dutch Guiana (habits).

*Coereba chloropyga* Snethlage, Bol. Mus. Goeldi, 8, p. 467, 1914—part, Marajó (Rio Arary, São Natal, Pindobal), Mexiana, Maracá, Rio Jary (Santo Antonio da Cachoeira), Monte Alegre, and Rio Jamundá (Faro).

*Certhiola guianensis* (not of Cabanis) Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—Cayenne; Sundevall, Ofvers. Vetensk.-Akad. Handl., 26, p. 624, 1869—part, Surinam (good diag.).

*Coereba guianensis* Hellmayr, Nov. Zool., 12, p. 272, 1905—part, Rio Negro (Marabitanas, Lamalonga, Cobati); Lowe, Ibis, 1912, p. 507—part, Rio Negro (Marabitanas, Cobati).

*Coereba chloropyga guianensis* Bangs and Penard, Bull. Mus. Comp. Zool., 62, p. 84, 1918—vicinity of Paramaribo, Dutch Guiana.

*Coereba chloropyga* subsp. Berlepsch, Nov. Zool., 15, p. 112, 1908—Ipousin (Approuague River) and Isle le Père, French Guiana.

*Coereba chloropyga minima* Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 118, 124—Mexiana and Cachoeira, Marajó (crit., range).

*Certhiola mexicana* (not of Sclater) Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 772, 1871—part, Cobati and Marabitanas, Rio Negro.

**Range.**—French and Dutch Guiana, and northern Brazil, south to the north bank and the islands in the estuary of the Amazon, west to the Rio Negro.<sup>1</sup>

6: Brazil (Rio Counany, 1; Boa Vista, Rio Branco, 4; Rio Maycurú, 1).

**\*Coereba flaveola guianensis (Cabanis).<sup>2</sup> GUIANAN BANANAQUIT.**

<sup>1</sup> The range of *C. f. minima* may possibly extend even farther to the west, and Taczanowski's record (Orn. Pér., 1, p. 441) of *C. chloropyga* from Pebas refers perhaps to the present form.

<sup>2</sup> *Coereba flaveola guianensis* (Cabanis): Similar to *C. f. minima*, but above even more blackish with the rump brighter, clear lemon chrome; no white

*Certhiola guianensis* Cabanis, Mus. Hein., 1, p. 97, 1851—"Guiana"—British Guiana (type in Heine Collection, now in Municipal Museum, Halberstadt, examined); Sundevall, Ofvers. Vetensk.-Akad. Handl., 26, p. 624, 1869—part, Guiana.

*Coereba guianensis* Berlepsch and Hartert, Nov. Zool., 9, p. 17, 1902—Suapure, Caura, Venezuela (crit.; spec. examined); Hellmayr, l.c., 12, p. 272, 1905—part, British Guiana (excl. Roraima) and Venezuela (Caura Valley); Lowe, Ibis, 1912, p. 507—part, British Guiana (excl. Roraima) and southern Venezuela (Suapure, Caura); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 167, 1916—Suapure, Caura River, and (?) Ciudad Bolivar, Orinoco, Venezuela; Chubb, Bds. Brit. Guiana, 2, p. 473, 1921—part, Bartica, Mazaruni River, Bonasika, Abary River, Great Falls of the Demerara, Caramang River, Camacusa, and Georgetown.

*Certhiola flaveola* (not *Certhia flaveola* Linnaeus) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, "1848," p. 675, 1849—British Guiana (in part).

*Certhiola chloropyga* (not of Cabanis) Finsch, Verh. Zool. Bot. Gesell. Wien, 21, p. 779, 1871—part, Demerara, British Guiana (crit.); Salvin, Ibis, 1885, p. 207—part, Bartica Grove, Camacusa, and Atapuraw River, British Guiana; Sclater, Cat. Bds. Brit. Mus., 11, p. 44, 1886—part, spec. e-k, Atapuraw, Bartica Grove, and Camacusa, British Guiana.

*Range*.—British Guiana (excepting Roraima and probably other adjoining mountains) and eastern Venezuela (Caura Valley).<sup>1</sup>

2: British Guiana (Demerara River, 2).

### ***Coereba flaveola roraimae* Chapman.<sup>2</sup> RORAIMA BANANAQUIT.**

*Coereba guianensis roraimae* Chapman, Amer. Mus. Nov., 341, p. 6, Feb., 1929—Arabupu, Roraima, Venezuela (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 63, p. 124, 1931—Roraima (Paulo, Arabupu) and Mount Duida, Venezuela.

alar speculum. Wing, 55–58, (female) 52–55; tail, 33–37, (female) 29–32; bill, 11–12.

Birds from the Caura Valley, Venezuela, are in every respect similar to those from British Guiana. As far as is possible to judge from the slightly faded specimens, the type appears to belong with the race diffused through the lowland districts of British Guiana.

This form closely resembles *C. f. luteola* in the rich coloration of the throat, but is not so black above, and lacks the white wing-spot.

*Additional material examined*.—British Guiana: Bartica Grove, 4; Camacusa, 1; Demerara, 5; unspecified, 2.—Venezuela: Suapure, Caura Valley, 6.

<sup>1</sup> I cannot help thinking that the specimen from Ciudad Bolivar sent by S. M. Klages to the American Museum is incorrectly labeled, since five skins obtained there by the same collector pertain without question to the black-backed Caribbean race (*C. f. luteola*).

<sup>2</sup> *Coereba flaveola roraimae* Chapman: Exceedingly similar to *C. f. guianensis*, but slightly larger; back darker, less contrasting with color of crown; throat also a little darker gray. Wing, 58–61, (female) 56–57; tail, 37–39, (female) 34–35; bill, 11–12.

I am a little doubtful as to the propriety of keeping this form separate, but would like to see a more complete series before condemning it.

*Material examined*.—Venezuela: Roraima, 4.

*Certhiola chloropyga* (not of Cabanis) Salvin, Ibis, 1885, p. 207—part, Roraima; Sclater, Cat. Bds. Brit. Mus., 11, p. 44, 1886—part, spec. a-d, Roraima.

*Coereba guianensis* (not *Certhiola guianensis* Cabanis) Hellmayr, Nov. Zool., 12, p. 272, 1905—part, Roraima; Lowe, Ibis, 1912, p. 507—part, Roraima and (?) Merumé Mountains, British Guiana; Chubb, Bds. Brit. Guiana, 2, p. 473, 1921—part, Roraima, and (?) upper Takutu Mountains.

*Range*.—Upper Tropical zone of Duida and Roraima in Venezuela, and probably other adjacent mountains in British Guiana.

\**Coereba flaveola luteola* (Cabanis).<sup>1</sup> CARIBBEAN BANANAQUIT.

*Certhiola luteola* Cabanis, Mus. Hein., 1, p. 96, 1851—Puerto Cabello (?), Venezuela (type in Heine Collection, now in Municipal Museum, Halberstadt); Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—part, spec. h, Trinidad; Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 194—Turbo and Cartagena, Colombia; idem, l.c., 1864, p. 271—Trinidad and Venezuela (crit.); Taylor, Ibis, 1864, p. 81—Venezuela (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 167—Carúpano, Venezuela; Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 621, 1869 (crit.); Finsch, Proc. Zool. Soc. Lond., 1870, p. 561—Trinidad; idem, Verh. Zool. Bot. Ges. Wien, 21, p. 767, 1871—Trinidad, Venezuela, and Santa Marta, Colombia (monog.); Ridgway, Amer. Natur., 7, p. 612, 1873—Tobago, Trinidad, and northern shore of South America (crit.); Salvin and Godman, Ibis, 1880, p. 119—Santa Marta (habits); Berlepsch, Ibis, 1884, p. 432—Angostura, Orinoco, Venezuela; Ridgway, Proc. U. S. Nat. Mus., 7, p. 173, 1884—Trinidad; Sclater, Cat. Bds. Brit. Mus., 11, p. 40, 1886—Colombia (Santa Marta, Valle de Upar), Venezuela (Carúpano), and Trinidad.

*Coereba luteola* Cory, Auk, 8, p. 38, 1891 (range, diag.); idem, Auk, 10, p. 220, 1893—Tobago; Chapman, Bull. Amer. Mus. N. H., 6, p. 25, 1894—Trinidad; Robinson, Proc. U. S. Nat. Mus., 18, pp. 679, 685, 1896—Margarita

<sup>1</sup> *Coereba flaveola luteola* (Cabanis): Nearest to *C. f. guianensis*, but upper parts deeper black with a conspicuous white alar speculum; throat darker gray; rump and under surface richer lemon chrome.

In another connection (Arch. Naturg., 90, A, Heft 2, pp. 169–172, 1924) I have explained that the segregation of an eastern form, for which the earliest name, as ascertained by an examination of the type, is *C. major* Cabanis, was barely justifiable. The far more extensive material at present available not only substantiates this conclusion, but also tends to show that even *C. l. obscura* cannot be maintained. In making comparisons it should be kept in mind that males, besides being larger, are distinguished by blacker back and more extensive, brighter yellow uropygial area. Furthermore, old skins being apt to become duller through fading, care must be taken in selecting proper material. With a goodly number of recently collected specimens from Tobago, Trinidad, and northeastern Venezuela, I fail to perceive the slightest difference in coloration. Dimensions being also the same, I cannot but regard *major*, *trinitalis* and *hellmayri* as strictly synonymous. *C. godmani* belongs here too, since the type (and only known specimen) is nowise different. If it really came from Grenada, it must have been a straggler from Tobago. Birds from the Caracas-Lake Valencia region (typical *luteola*) average duller on the upper parts, only a few males being as jet-black as the majority from Trinidad, etc., and the few examples available from the Rio Aurare (east shore of Lake Maracaibo) and the lower slopes of the Andes overlooking the Maracaibo plains are similar. Three adult males from Encontrados

Island and La Guayra, Venezuela; Phelps, Auk, 14, p. 363, 1897—Cumanacoa, Venezuela; Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta; Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 313—base of La Popa, Cartagena, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 173, 1900—Cacagualito, Santa Marta, and Cienaga, Colombia; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 176, 1901—La Guaria, Venezuela; Berlepsch and Hartert, Nov. Zool., 9, p. 16, 1902—Altagracia, Caicara, and Ciudad Bolivar, Orinoco, Venezuela; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 406, 1902 (monog.); Clark, Auk, 19, p. 266, 1902—Margarita Island; Hellmayr, Nov. Zool., 12, p. 272, 1905—Venezuela south to the Orinoco, Trinidad, and Tobago (crit.); idem, l.c., 13, p. 7, 1906—Caparo, Valencia, and Seelet, Trinidad (crit.); Clark, Proc. Bost. Soc. N. H., 32, p. 293, 1905—"Grenada" (accidental); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 187, 1906—Aripo, Trinidad; idem, l.c., 1, p. 357, 1908—Aripo and Carenage, Trinidad; Lowe, Ibis, 1907, p. 565—Margarita Island, Laguna de Obispo (Venezuela), and Trinidad (crit.); idem, Ibis, 1909, p. 323—Cariaco, Venezuela; Beebe, Zoologica (N.Y.), 1, p. 102, 1909—La Ceiba, Rio Guarapiche, Venezuela; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 250, 1909—Margarita Island; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 209, 1913—Cariquito, Isla de Morocotico and Jocopita, Manimo River, Venezuela; Williams, Bull. Dept. Agric. Trin. Tob., 20, p. 127, 1922—Woodland and Maracas, Trinidad.

*Coereba luteola luteola* Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 52, 1912—Las Quiguas, Carabobo (crit.); Cherrie, Sci. Bull., Mus.

and Orope, in the humid region south of Lake Maracaibo, however, are very black again. They have been described by Cory as *C. l. obscura*, but I am unable to distinguish them from Trinidad and Tobago birds except by their slightly darker gray throat, a divergency that requires corroboration by a more adequate series. Under these circumstances, I cannot recognize more than one form among the inhabitants of Caribbean Venezuela and Colombia.

#### MEASUREMENTS OF ADULT MALES

	Wing	Tail	Bill
Ten from Tobago.....	57-60, 61 (one)	35-39	12-13
Eight from Trinidad.....	57-60, 61 (two), 62 (one)	34-39	12-13
One from "Grenada" ( <i>godmani</i> )...	57	35	12½
Two from Cariaco, Venezuela.....	56, 57	34, 37	12, 12
Two from Cumaná, Venezuela.....	57, 59	36, 38	12½, 13
Six from Margarita Island.....	57-59	34-37	12-13
Two from Altagracia, Orinoco.....	58, 59	36, 37	12, 12
One from Ciudad Bolivar, Orinoco.....	58	37	12
"British Guiana" (type of <i>C. major</i> )	60½	38	13
One from Loma Redonda, Caracas.....	58	36	11½
Ten from Caracas.....	57-60	36-40	11-12
Two from Aragua.....	56, 56	34, 35	11, 11½
One from Lake Valencia.....	59	38	12
One from Rio Aurare, Zulia.....	59	35	12
One from Colón, Tachira.....	60	37	12
Three from Encontrados, Zulia ( <i>C. l. obscura</i> ).....	58, 58, 60	37, 37, 38	12½-13

*Additional material examined.*—Tobago, 4; Trinidad, 20.—Venezuela: Cariaco, Paria, 2; Guiría, Paria Peninsula, 1; Cumaná, 4; San Antonio, Sucre, 1; Loma Redonda, near Caracas, 4; San Esteban, Carabobo, 2; Altagracia, Orinoco, 4; Ciudad Bolivar, Orinoco, 5.

- Brookl. Inst., 2, p. 165, 1916—Orinoco region (nest and eggs descr.); Chapman, Bull. Amer. Mus. N. H., 36, p. 578, 1917—La Playa (near Barranquilla), Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 459, 1922—Santa Marta, Cacagualito, Bonda, Mamatoco, Las Vegas, Fundación, Punto Caiman, Don Diego, and Rio Hacha, Colombia (crit., habits); Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 169, 1924—Loma Redonda, Caracas region (crit.); Darlington, Bull. Mus. Comp. Zool., 71, p. 413, 1931—Rio Frio, Magdalena, Colombia.
- Certhiola major* Cabanis, Mus. Hein., 1, p. 97, 1851—"Guiana"<sup>1</sup> (type in Berlin Museum examined); Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 622, 1869 (ex Cabanis).
- Coereba luteola major* Lowe, Ibis, 1912, p. 508, pl. 8, fig. 2—Caribbean coast district of Colombia and Venezuela (crit.).
- Certhiola godmani* Cory, Auk, 6, p. 219, 1889—"Grenada" (type in collection of C. B. Cory, now in Field Museum).
- Coereba trinitatis* (not of Bonaparte, 1854) Lowe, Ibis, (9), 1, p. 566 (in text) 1907—Trinidad (type probably in collection of P. R. Lowe).
- Coereba luteola hellmayri* Riley, Proc. Biol. Soc. Wash., 23, p. 23, 1910—new name for *Coereba trinitatis* Lowe, preoccupied; Lowe, Ibis, 1912, p. 509—Trinidad and Tobago (crit.); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 166, 1916—Cristóbal Colón, Paria Peninsula, Venezuela (crit.).
- Coereba luteola obscura* Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 291, 1913—Encontrados, Zulia, Venezuela (type in Field Museum).
- Certhiola flaveola* (not *Certhia flaveola* Linnaeus) Hartlaub, Isis, 1847, p. 614—Trinidad; Jardine, Ann. Mag. Nat. Hist., 20, p. 372, 1847—Tobago; Sclater, Cat. Coll. Amer. Bds., p. 54, 1862—part, spec. a, Tobago; Léotaud, Ois. Trinidad, p. 126, 1866—Trinidad.
- Certhiola* sp. Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 621, 1869—"Minas Geraes" (errore; cf. Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 770, 1871).

**Range.**—Islands of Tobago and Trinidad; northern Venezuela, south to the Orinoco Valley and the foot of the Andes in the Maracaibo basin, and Caribbean coast region of Colombia. Accidental in Grenada (one record).

81: Grenada, 1; Tobago, 18; Venezuela (Margarita Island, 11; Caracas, 23; Macuto, Caracas, 7; Maracay, Aragua, 7; Lake Valencia, Carabobo, 2; Rio Aurare, Zulia, 2; Encontrados, Zulia, 2; Orope, Zulia, 1; Catatumbo River, Zulia, 1; San Juan de Colón, Tachira, 3); Colombia (El Guayabal, ten miles north of San José de Cucuta, Santander, 2; Tucurinca, 1).

**\**Coereba flaveola montana* Lowe.<sup>2</sup> MÉRIDA BANANAQUIT.**

<sup>1</sup> The type probably came from the mouth of the Barima River in the delta of the Orinoco.

<sup>2</sup> *Coereba flaveola montana* Lowe: Most nearly related to *C. f. columbiana*, but upper parts markedly darker, chaetura drab to fuscous black, instead of deep mouse gray to dark grayish olive; yellow of rump brighter, approaching the lemon-

*Coereba luteola montana* Lowe, Ibis, (9), 6, p. 509, 1912—Mérida (alt. 1,600 meters), Venezuela (type in Tring Museum).

**Range.**—Subtropical zone of the Cordillera of Mérida, western Venezuela.

1: Venezuela (Mérida, 1).

**\**Coereba flaveola columbiana* (Cabanis).<sup>1</sup> COLOMBIAN BANANAQUIT.**

*Certhiola columbiana* Cabanis, Journ. Orn., 13, p. 412, 1865—"Bogotá," Colombia (type in Berlin Museum); Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 622, 1869—Bogotá (crit.).

*Certhiola mexicana* (not of Sclater) Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 349—Panama Railroad; Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 772, 1871—part, Bogotá, Colombia (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 497—Remedios and Medellín, Antioquia (nest and eggs descr.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 250, 1883—part, Panama Railroad and Colombia; Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—part, spec. p-v, x-b', Lion Hill and Paraiso Station (Panama), Bogotá and Medellín, Colombia.

*Coereba mexicana* Bangs, Proc. New Engl. Zool. Cl., 2, p. 28, 1900—Loma del León, Panama; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 409, 1902—part, Panama and Colombia; Pigué, Mém. Soc. Neuchât. Sci. Nat., 5, p. 809, 1914—Medellín, Colombia; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 277, 1918—Gatun, Panama.

*Coereba mexicana mexicana* Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 225, 1922—Mount Sapo, Darien.

chrome of *luteola*; throat darker gray, more like *luteola*; under parts on average more richly colored; bill longer as well as stronger. Wing, 57–60, (female) 54–56; tail, 34–36, (female) 30–33; bill,  $12\frac{1}{2}$ – $13\frac{1}{2}$ .

This form is truly intermediate between *luteola* and *columbiana*. It approaches the Caribbean race in the darker coloration of the back, though it is never as jet-black as highly plumaged adult males of *luteola*, and the rump, while brighter yellow than in *columbiana*, does not quite attain the rich lemon-chrome tone of *luteola*. Certain unusually dark-backed specimens of *columbiana* from Santander come very close to females of *montana*, but have smaller bills and a duller, more olive yellow rump. The large bill seems a fairly constant feature, though this organ is hardly less developed in some specimens from Trinidad and Tobago.

**Material examined.**—Venezuela: Mérida (alt. 1,600 meters), 14.

<sup>1</sup>*Coereba flaveola columbiana* (Cabanis): Closely similar to *C. f. mexicana*, but back somewhat darker, less olivaceous, and the rump decidedly brighter and less greenish, strontian yellow instead of olive yellow.

Birds from the Panama Canal Zone agree well with those from Colombia.

Specimens from Santander (Bucaramanga; El Tambor, Rio Lebrija) frequently have the back darker (about chaetura drab), the uropygial patch brighter yellow, and the throat a deeper gray. Similar individuals also occur among native "Bogotá" skins. They evidently form the transition to *C. f. luteola* (which is found—not far away—in the Maracaibo pocket). In fact, they can be told from numerous females of that race only by their somewhat duller yellow rump.

**Additional material examined.**—Colombia: Dabeiba, 1; Honda, 3; Medellín, 1; Bucaramanga, 10; "Bogotá," 14.

*Certhiola luteola* (not of Cabanis) Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; Sclater, Cat. Coll. Amer. Bds., p. 53, 1862—part, spec. f, g, Bogotá; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 291, 1862—Panama Railroad; Wyatt, Ibis, 1871, p. 324—lower mountain districts [of Santander], Colombia.

*Certhiola mexicana* subsp. Berlepsch, Journ. Orn., 32, p. 288, 1884—Bucaramanga (crit.).

*Certhiola mexicana columbiana* Berlepsch, Zeits. Ges. Orn., 4, p. 184, 1887—Bogotá.

*Coereba mexicana columbiana* Lowe, Ibis, 1912, p. 500—Colombia to Panama (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 578, 1917—part, Dabeiba, Alto Bonito, and Peque (Antioquia), Honda, Chicoral, La Candela, San Agustín, and Andalucía (Magdalena Valley), El Alto de la Paz (Bogotá region), Buena Vista and Villavicencio, Colombia; Griscom, Bull. Mus. Comp. Zool., 69, p. 185, 1929—Cana, Darien; idem, l.c., 72, p. 367, 1932—Obaldia, eastern Panama.

*Certhiola peruviana* (not of Cabanis) Ridgway, Amer. Natur., 7, p. 613, 1873—part, Panama Railroad.

**Range.**—Eastern Panama, from the Canal Zone eastwards, and parts of Colombia, in State of Antioquia (Dabeiba, Alto Bonito, and Peque, Rio Sucio; Medellín), in the Magdalena Valley (from Santander southwards), and at the eastern base of the eastern Andes (Buena Vista and Villavicencio).

12: Panama (Colón, 6); Colombia (El Tambor, Rio Lebrija, Santander, 1; "Bogotá," 4; Andalucía, Huila, 1).

**\**Coereba flaveola cerinoclunis* Bangs.<sup>1</sup> SAN MIGUEL BANANAQUIT.**

*Coereba cerinoclunis* Bangs, Proc. New Engl. Zool. Cl., 2, p. 52, 1901—San Miguel Island, Bay of Panama (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 393, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 408, 1902—San Miguel Island (monog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 157, 1905—San Miguel and Saboga Islands (crit.); Lowe, Ibis, 1912, p. 510—San Miguel Island (ex Bangs); Rendahl, Ark. Zool., 13, No. 4, p. 49, 1920—Viveros Island (crit.).

*Coereba mexicana columbiana* (not *Certhiola columbiana* Cabanis) Bangs, Auk, 18, p. 30, 1901—San Miguel Island.

<sup>1</sup>*Coereba flaveola cerinoclunis* Bangs: Similar to *C. f. columbiana*, but back sooty black instead of deep mouse gray to dark grayish olive. In the blackish upper parts this form resembles *C. f. luteola*, but may be readily distinguished by paler gray throat; strontian yellow instead of lemon chrome rump; much smaller white alar speculum; less extensive white apical spots to the lateral tail feathers; finally by somewhat less richly colored under parts. Wing, 60, (female) 53; tail, 38, (female) 30; bill, 12–13.



*Range*.—Islands of San Miguel, Saboga, and Viveros, Pearl Archipelago, in the Bay of Panama.

2: San Miguel Island.

**\*Coereba flaveola intermedia** (Salvadori and Festa).<sup>1</sup> INTERMEDIATE BANANAQUIT.

*Certhiola intermedia* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 13, 1899—Gualaquiza and Zamora, eastern Ecuador (type in Turin Museum).

*Certhiola luteola* (not of Cabanis) Sclater, Proc. Zool. Soc. Lond., 26, p. 452, 1858—Zamora and Gualaquiza; idem, l.c., 28, pp. 85, 292, 1860—Nanegal and Esmeraldas, western Ecuador; idem, Cat. Coll. Amer. Bds., p. 54, 1862—part, spec. a-e, Nanegal, Esmeraldas, Zamora, and Gualaquiza.

*Certhiola mexicana* (not of Sclater) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271—part, Ecuador; Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 772, 1871—part, Ecuador (crit.); Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 543—Chimbo; Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—part, spec. c'-o', "vicinity of Quito," Intag, Esmeraldas, Zamora, Gualaquiza, Nanegal, and Sarayacu, Ecuador; Goodfellow, Ibis, 1901, p. 319—Baeza, Intag, and Milligalli (nest and eggs descr.).

*Coereba* (= *Certhiola*) *mexicana* Hartert, Nov. Zool., 5, p. 481, 1898—Chimbo and Paramba, Ecuador.

*Coereba mexicana* Ménégaux, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 84, 1911—Santo Domingo and Gualea, Ecuador.

<sup>1</sup> *Coereba flaveola intermedia* (Salvadori and Festa): Exceedingly close to *C. f. columbiana*, but under parts of a richer, brighter yellow, approaching wax yellow; dorsal surface on average slightly darker, with the rump generally of a richer yellow. From *C. f. chloropyga* this form chiefly differs by the conspicuous white alar speculum, darker and more sooty back, brighter yellow rump, deeper gray throat, etc.

Birds from western Ecuador average slightly darker, less olivaceous, on the upper parts, though the variation is barely perceptible. Three adults from Moyobamba are identical in coloration, but incline to larger measurements, thus verging to *C. f. magnirostris*. How far south and east *C. f. intermedia* ranges in Peru, I am unable to ascertain owing to lack of material. Taczanowski (Orn. Pér., 1, p. 441, 1884) records *C. chloropyga* from Pebas, and Finsch (Verh. Zool. Bot. Ges. Wien, 21, p. 781, 1871) refers two birds from the upper Ucayali to the same form. It will be recalled that a series from Huánuco Province and Junín (Chanchamayo) turned out to be inseparable from *chloropyga*, but where this race meets the northern *intermedia* remains to be determined. About the name *C. peruviana*, cf. footnote on p. 286.

MEASUREMENTS

	Wing	Tail	Bill
Three males from eastern Ecuador.....	55-57	31-33	12-13
Six males from western Ecuador.....	56-59	32-35	11½-13
Three males from Moyobamba, Peru.....	58, 61, 63	36, 37, —	13, 13, 13½

*Additional material examined*.—Colombia: Tumaco, 1.—Western Ecuador: San Javier, Prov. Esmeraldas, 4; Paramba, Prov. Imbabura, 6; Gualea, 3; Chongon, Prov. Guayas, 1; Chimbo, 1.—Eastern Ecuador: Baeza, 5; Alpa-yacu, Rio Pastaza, 2; Gualaquiza, 1.

*Coereba mexicana* (subsp.?) Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 80, 1922—Gualea.

*Certhiola columbiana* (not of Cabanis) Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 13, 1899—Gualea, Intag, Playas (Guayas), and Rio Peripa, western Ecuador.

*Coereba mexicana columbiana* Chapman, Bull. Amer. Mus. N. H., 36, p. 578, 1917—part, Tumaco, Buena Vista, and Ricaurte, Nariño, Colombia.

*Coereba mexicana intermedia* Lowe, Ibis, 1912, p. 501—Ecuador (crit.); Chapman, Bull. Amer. Mus. N. H., 55, p. 637, 1926—western Ecuador (many localities from Esmeraldas to Cebollal), eastern Ecuador (Zamora, Guayaba, Rio Suno, below San José, below Sardinas, below Oyacachi), and Paletillas, northwestern Peru (crit.); Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—San José, Ecuador.

**Range.**—Tropical zone of extreme southwestern Colombia (Nariño), eastern and western Ecuador, and extreme northern Peru (Paletillas, Dept. Payta; Moyobamba, Dept. Amazonas).

5: Ecuador (Puente de Chimbo, 1); Peru (Moyobamba, 4).

**\**Coereba flaveola magnirostris* (Taczanowski).<sup>1</sup> LARGE-BILLED BANANAQUIT.**

*Certhiola magnirostris* Taczanowski, Proc. Zool. Soc. Lond., 1880, p. 193—Callacate, upper Marañón, Peru (type lost, formerly in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 177, 1927); idem, Orn. Pér., 1, p. 441, 1884—upper Marañón.

*Coereba magnirostris* Lowe, Ibis, 1912, p. 502—part, Marañón localities (excl. Tschudi's reference and Paltaypampa); Bangs and Noble, Auk, 35, p. 459, 1918—Huancabamba, Perico, and Bellavista, Rio Marañón.

*Certhiola* sp. Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 225—Guajango.

*Certhiola mexicana* (not of Sclater, 1856) Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—part, spec. q', r', Callacate and Guajango; Salvin, Nov. Zool., 2, p. 4, 1895—Cajamarca, Cajabamba, and Viña, Huamachuco.

**Range.**—Upper Tropical and Subtropical zones of the upper Marañón Valley, northern Peru (Callacate, Guajango, Huanca-

<sup>1</sup>*Coereba flaveola magnirostris* (Taczanowski): Nearest to *C. f. chloropyga*, but with heavier, longer bill; back much paler, near deep grayish olive instead of sooty grayish; a distinct, though small white alar speculum; white tips to lateral rectrices decidedly wider; throat paler, pallid neutral gray rather than pale neutral gray to light neutral gray; yellow of breast paler, strontian yellow instead of wax yellow, etc. Wing, 60–64, (female) 57; tail, 38–41, (female) 36; bill, 15–16, (female) 14.

From its other geographical neighbor, *C. f. intermedia*, the upper Marañón form differs at a glance by its larger size, notably much larger bill, much paler coloration both above and below, duller olive yellow rump, and longer white tips to the lateral rectrices, though in dimensions it is approached by specimens from Moyobamba, which, according to coloration, belong with *C. f. intermedia*.

**Additional material examined.**—Peru: Huancabamba, 1; Perico, 1; Bellavista, 4; Viña, Huamachuco, 4.

bamba, Perico, Bellavista, Cajamarca, Cajabamba, Huamachuco, Viña).

1: Peru (Cajamarca, 1).

**\*Coereba flaveola pacifica** Lowe.<sup>1</sup> PACIFIC BANANAQUIT.

*Coereba pacifica* Lowe, Bull. Brit. Orn. Cl., 29, p. 85, 1912—Pacasmayo, Dept. Libertad, Peru (type in British Museum); idem, Ibis, 1912, p. 503—Eten, Pacasmayo, Chepen, and Chimbote, Peru (crit.).

*Certhiola peruviana* (not of Cabanis) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 225—Pacasmayo; idem, Orn. Pér., 1, p. 439, 1884—part, Pacasmayo and Paucal.

*Certhiola mexicana* (not of Sclater, 1856) Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—part, spec. p', Pacasmayo.

**Range.**—Pacific slope of western Peru, in depts. of Lambayeque (Eten), Libertad (Pacasmayo, Chepen, Paucal, Menocucho), and Ancachs (Chimbote).

1: Peru (Menocucho, 1).

**\*Coereba flaveola gorgonae** Thayer and Bangs.<sup>2</sup> GORGONA ISLAND BANANAQUIT.

*Coereba gorgonae* Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 97, 1905—Gorgona Island, off Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 394, 1930); Lowe, Ibis, 1912, p. 510—Gorgona Island.

*Certhiola mexicana* (not of Sclater, 1856) Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1888—part, spec. w, Gorgona Island.

**Range.**—Gorgona Island, off Colombia.

2: Gorgona Island.

<sup>1</sup> *Coereba flaveola pacifica* Lowe: Nearest to *C. f. intermedia* and about the same size, but with shorter bill; back less sooty; throat markedly paler gray (pallid neutral gray rather than neutral gray); yellow of under parts lighter, strontian yellow instead of wax yellow; flanks and anal region buffy grayish, not bright yellow like the remainder of the under parts as in *intermedia*. In coloration, this form very nearly duplicates *C. f. magnirostris*, but is considerably smaller and has a much shorter, slenderer bill. Wing, 56–58; tail, 34–36; bill, 10–11.

**Additional material examined.**—Peru: Eten, Lambayeque, 1; Pacasmayo, Libertad, 1.

<sup>2</sup> *Coereba flaveola gorgonae* Thayer and Bangs: Nearest to *C. f. intermedia*, but sides of throat and malar region finely barred with dusky; back darker, sooty black, nearly as dark as the crown; white alar speculum reduced to a mere dot; white apical spots to lateral rectrices less extensive. Wing, 55–57, (female) 52–53; tail, 32, (female) 29–32; bill, 12–13.

Certain specimens from northwestern Ecuador approach this well-marked insular form in one or the other character, thus showing their close relationship. The dusky-barred malar region recalls *C. f. caucae*, from which *C. f. gorgonae* is, however, easily distinguished by the nearly plain white superciliaries, more blackish mantle, much smaller alar speculum, and much darker (neutral gray instead of pale neutral gray) throat.

**Additional material examined.**—Gorgona Island, 3.

**Coereba flaveola caucaae** Chapman.<sup>1</sup> CAUCA BANANAQUIT.

*Coereba mexicana caucaae* Chapman, Bull. Amer. Mus. N. H., 33, p. 186, 1914—Cali, Cauca Valley, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 579, 1917—Cali, Las Lomitas, east of Palmira, San Antonio, and Rio Frio, Colombia.

*Coereba chloropyga mexicana* (not *Certhiola mexicana* Sclater) Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1098—Pueblo Rico, western Andes, Colombia.

*Coereba luteola* (not *Certhiola luteola* Cabanis) Lowe, Ibis, 1912, p. 501 (in text)—Juntas [Cauca], Colombia.

*Range*.—Western Colombia, in the upper Cauca Valley and on the adjoining slopes of the western and Central Andes.

**\*Coereba flaveola mexicana** (Sclater). MEXICAN BANANAQUIT.

*Certhiola mexicana* Sclater, Proc. Zool. Soc. Lond., 24, p. 286, 1856—southern Mexico [=Cordova or Jalapa, Vera Cruz] (type in British Museum); idem, l.c., 27, pp. 364, 376, 1859—Jalapa, Vera Cruz, and Playa Vicente, Oaxaca; Salvin, Ibis, 1861, p. 352—Chisec, Vera Paz; Sclater, Cat. Coll. Amer. Bds., p. 54, 1862—Jalapa and Choctum, Vera Paz; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271—part, Mexico (crit.); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 98, 1868—Turrialba and "Aleno" [=Atenas], Costa Rica; Frantzius, Journ. Orn., 17, p. 297, 1869—Costa Rica; Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 623, 1869—Mexico (crit.); Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 772, 1871—part, Mexico, Guatemala, Costa Rica, and Chiriquí (Bugaba); Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 42, 1878—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 250, 1883—part, Mexico (Jalapa, Playa Vicente), Guatemala (Choctum), Costa Rica (Turrialba, Atenas), and Panama (David, Bugaba, Cordillera del Chucú); Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—part, spec. a-o, Jalapa, Choctum (Guatemala), Costa Rica (Turrialba), Bugaba (Chiriquí), and Cordillera del Chucú (Veragua).

*Certhiola luteola* (not of Cabanis) Lawrence, Ann. Lyc. Nat. Hist., 8, p. 175, 1865—David, Chiriquí; Salvin, Proc. Zool. Soc. Lond., 1867, p. 137—David; idem, l.c., 1870, p. 185—Cordillera del Chucú, Veragua, and Bugaba, Chiriquí.

*Coereba mexicana* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 108, 1887—Naráño de Cartago and Volcan de Barba, Costa Rica; Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 137, 1893—Boruca, Térraba,

<sup>1</sup>*Coereba flaveola caucaae* Chapman: Most nearly related to *C. f. columbiana*, but white superciliaries much narrower and variegated with dusky edges, and throat paler, nearly pale neutral gray, finely vermiculated with dusky laterally and on malar region. Wing, 57, (female) 52; tail, 33-35; bill, 11-12.

The specimen from Pueblo Rico recorded by me as *C. c. mexicana* proves, on reexamination, to be identical with topotypes kindly forwarded by Dr. Chapman. The restricted dusky-edged superciliaries and the freckled malar region serve to distinguish this form at first sight.

*Material examined*.—Colombia, western Andes: Pueblo Rico, 1; Las Lomitas, 1; Cali, Cauca, 2.

and Buenos Aires, Costa Rica; Richmond, Proc. U. S. Nat. Mus., 16, p. 488, 1893—Greytown, Nicaragua, and Rio Frio, Costa Rica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 409, 1902—part, Mexican, Guatemalan, Costa Rican, and west Panama localities and references; Bangs, Auk, 18, p. 369, 1901—Divala, Chiriquí; idem, Auk, 24, p. 308, 1907—Boruca and Barránca de Térraba, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 819, 1910—Guayábo, Bonilla, Carrillo, El General de Térraba, Pózo Azul de Pirris, Guácimo, Guápiles, El Hogar, and Boruca, Costa Rica (habits); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 275, 1910—Guayábo, Costa Rica; Lowe, Ibis, 1912, p. 499—Mexico to western Panama (crit.); Rendahl, Ark. Zool., 12, No. 8, p. 35, 1919—San Juan del Norte, Nicaragua.

*Coereba mexicana mexicana* Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 461, 1928—Almirante, Panama; Peters, Bull. Mus. Comp. Zool., 71, p. 339, 1931—Changuinola, Almirante, Western River, Shepherd Island, and Gerchow Key, western Panama; Griscom, Bull. Amer. Mus. N. H., 64, p. 370, 1932—Finca Chamá, Chimoxan, and Finca Sepacuite, Guatemala.

**Range.**—Southeastern Mexico, in states of Vera Cruz (Jalapa) and Oaxaca (Playa Vicente), and in Guatemala, Nicaragua, Costa Rica, and western Panama, as far east as Veragua.<sup>1</sup>

11: Guatemala (Vera Paz, 1); Costa Rica (Guayábo, 3; Guácimo, 1; El Pózo, Rio Térraba, 3; El General, 1; Boruca, 1; Buenos Aires, 1).

**\**Coereba flaveola ferryi* Cory.<sup>2</sup> TORTUGA BANANAQUIT.**

<sup>1</sup> Birds from Costa Rica agree with a series from Guatemala and a single Jalapa specimen. We have not seen any Veraguan material, which Lowe refers to the present form, but two skins from extreme western Panama (Chiriquí) do not differ in any way from others of more northern origin. The duller, more greenish yellow rump and the slightly paler, more olivaceous mantle serve to distinguish this race from *columbiana*.

**Additional material examined.**—Mexico: Jalapa, Vera Cruz, 1.—Guatemala: Choctum, 1; Vera Paz (unspecified), 4.—Costa Rica: Boruca, 4.—Panama: Bugaba, Chiriquí, 2.

<sup>2</sup> *Coereba flaveola ferryi* Cory: Most closely related to *C. f. luteola*, but forehead with a varying amount of white; back slightly duller, more fuscous and less sooty; uropygial area, though of equal extent, not quite so bright, strontian yellow rather than lemon chrome; throat slightly darker gray; inner secondaries with narrow pale grayish apical margins; extreme base of gape with suggestion of a bright-colored tumid rictus. Wing, 58–60, (female) 55; tail, 38–41, (female) 36; bill, 10½–11½.

This race is of unusual interest, proving as it does that even the bright tumid rictus heretofore considered an exclusive character of the Antillean forms is not an absolute criterion for their separation. While the continental *C. f. luteola* is entirely deprived of this peculiarity, the Tortuga birds, at the extreme base of the bill, show a distinct, though slight indication of such a development, which signifies an undeniable approach to *C. f. uropygialis* of the Dutch West Indies. Other points of passage in that direction are found in the duller coloration of the back and rump, as well as in the narrow grayish apical edges to the inner secondaries of the Tortuga form. The white color on the forehead is subject to considerable individual variation; it is never abruptly defined posteriorly and gives the effect of an irregular albinistic mutation. Scattered white feathers in the middle of the forehead are of fairly frequent occurrence in *uropygialis* too, and certain individuals

*Coereba ferryi* Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 221, 1909—Tortuga Island (type in Field Museum); Lowe, Ibis, 1912, p. 528—Tortuga (ex Cory).

*Range*.—Island of Tortuga (west of Margarita Island), off Venezuela.

8: Tortuga Island.

**\**Coereba flaveola uropygialis* Berlepsch.<sup>1</sup> CURACAO BANANAQUIT.**

*Coereba uropygialis* Berlepsch, Journ. Orn., 40, p. 77, 1892—Curaçao (type in Berlepsch Collection, now in Senckenbergian Natural History Museum, Frankfurt); Robinson, Flying Trip to Tropics, p. 165, 1895—Curaçao; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 420, 1902—Curaçao (monog.); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 202, 208, 213, 254, 1909—Aruba, Curaçao, and Bonaire; Lowe, Ibis, 1912, p. 523 (monog.).

*Certhiola uropygialis* Hartert, Ibis, 1893, pp. 295, 312, 327—Aruba, Curaçao, and Bonaire (crit., nest and eggs descr.).

*Coereba flaveola uropygialis* Hartert, Nov. Zool., 9, p. 297, 1902—Curaçao, Bonaire, and Aruba (crit.).

*Range*.—Islands of Aruba, Curaçao, and Bonaire, Caribbean Sea.

38: Aruba, 13; Curaçao, 10; Bonaire, 15.

**\**Coereba flaveola lowii* Cory.<sup>2</sup> LOS ROQUES BANANAQUIT.**

*Coereba lowii* Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 217, Oct., 1909—Los Roques, off Venezuela (type in Field Museum); Lowe, Ibis, 1912, p. 528 (ex Cory).

have hardly less white than the specimen with the minimum amount from Tortuga. *C. f. ferryi* is provided with a white alar speculum of the same extent as *C. f. luteola*, whereas in *C. f. uropygialis* the white is either wholly concealed or shows, at best, for the distance of one or two millimeters beyond the tips of the primary coverts. The gray of the throat is, as a rule, darker than in *luteola*, and in one or two examples fully as deep as in the type of *C. l. obscura*. The white apical spots on the lateral rectrices are often, but not constantly, more extensive than in *luteola*. The supercilaries are always white.

<sup>1</sup> *Coereba flaveola uropygialis* Berlepsch: Nearly allied to *C. f. ferryi*, but without a visible white alar speculum; upper parts less sooty, with the uropygial area more reduced and more greenish yellow; throat never gray, the chin and the lateral portions being black, the remainder white; bright-colored tumid rectus much more strongly developed. The grayish apical edges to the inner secondaries, besides, are wider, and similar markings are also found on the greater upper wing coverts.

There is some local variation in this form. Birds from Bonaire are on average darker above and have more white on the throat, whereas males from Curaçao have the least amount of it. Exceptions are, however, frequent, and I do not see any sufficient reason for further subdivision.

<sup>2</sup> *Coereba flaveola lowii* Cory: Nearly related to, and agreeing with, *C. f. alerrima* in the possession of a very conspicuous bright-colored tumid rectus, but readily distinguishable by having the back and upper wing coverts chaetura-drab, much paler and grayer than the black head; the edges to the remiges also paler, less sooty; the breast and middle of the abdomen much more strongly tinged with

*Range*.—Los Roques Island, east of Bonaire, in the southern Caribbean Sea.

4: Los Roques.

\**Coereba flaveola laurae* Lowe.<sup>1</sup> TESTIGOS BANANAQUIT.

*Coereba laurae* Lowe, Bull. Brit. Orn. Cl., 21, p. 108, 1908—Los Testigos (type in collection of P. R. Lowe); idem, Ibis, 1909, p. 320—Los Testigos (crit.); Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 232, 1909—Los Testigos (crit.); Lowe, Ibis, 1912, p. 527—Los Testigos (monog.).

*Range*.—Los Testigos Islands, north of Venezuela.

8: Los Testigos.

\**Coereba flaveola aterrima* (Lesson).<sup>2</sup> GRENADA BANANAQUIT.

*Dicaeum aterrimum* Lesson, Traité d'Orn., livr. 4, p. 303, Sept., 1830—locality unknown (=melanotic form; type in Paris Museum examined); Pucheran, Rev. Zool., 9, p. 135, 1846—"St. Thomas" (crit.).

olive; the lower abdomen and under tail coverts grayish olive instead of sooty gray; the uropygial patch somewhat brighter olive. Wings and tail are longer, and the bill, while of the same length, is stouter and less curved, recalling in shape that of *C. f. laurae*. Wing, 62, (female) 56; tail, 43, (female) 38; bill, 11–12.

A well-marked form of which only the four specimens listed above are known. All are in the melanotic plumage. Two are adult; the two others are molting and, if the abraded light yellowish olive feathers retained along the middle of the breast are the remnants of the juvenile plumage, this would seem to be quite different from the garb of the mature birds.

It remains to be ascertained by further exploration whether *C. f. lowii* is dimorphic like the races living on Grenada and St. Vincent, or whether the melanotic variety alone has survived.

<sup>1</sup>*Coereba flaveola laurae* Lowe: Resembles *C. f. atrata* in measurements of wing and tail as well as in coloration, but differs by lacking the bright crimson, tumid rictus and also by decidedly stronger, more elongated, apically less curved bill. Wing, 59–63, (female) 55–58; tail, 37–43, (female) 35–38; bill, 14–15.

Twelve specimens, adult and young, are all in the melanotic phase, and as also Dr. P. R. Lowe and the late Comte de Dalmas, the only other visitors on the islands, encountered only black birds, it may be taken for granted that no yellow-bellied variety exists on Los Testigos. In general coloration, viz., in having a distinct, though slight olive tinge on rump and posterior under parts, *C. f. laurae* comes pretty close to *C. f. atrata*, but is, if anything, somewhat blacker above, not "grayer" as stated by the describer. The bill, however, is much larger, both stouter and longer, and less curved in its apical portion. Not one of the twelve specimens shows the slightest trace of a crimson, tumid rictus, the bill being entirely black as in *C. f. luteola*.

*Additional material examined*.—Los Testigos, 4.

<sup>2</sup>*Coereba flaveola aterrima* (Lesson) exists in two varieties long regarded as different species. The normal form with white superciliaries, olive-yellow uropygial patch, white alar speculum, white tips to lateral rectrices, and yellow under parts, is not unlike *C. f. luteola*, but may be distinguished by blackish slate (instead of black) upper parts, less extensive and duller, olive yellow rather than lemon chrome rump patch, dark slate gray (instead of neutral gray) throat, and duller, lemon-yellow ventral surface. The melanotic form (*aterrima*, *wellsi*) is blackish (without any white on wings or tail excepting buffy whitish margins to the inner webs of the remiges), though rump, breast, and middle of the abdomen, i.e. those parts that are yellow in the normal form (*morrisi*), show a more or less pronounced olive-greenish

*Coereba alerrima* Hellmayr, Verh. Orn. Ges. Bay., 13, p. 197, 1917—Grenada (crit. on type).

*Certhiola wellsi* Cory, Auk, 6, p. 219, 1889—Grenada (type in coll. of C. B. Cory, now in Field Museum).

*Coereba wellsi* Cory, Auk, 8, p. 40, 1891—Grenada; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 423, 1902—Grenada (monog.); Clark, Proc. Bost. Soc. N. H., 32, p. 292, 1905—Grenada and Grenadines (crit., nest and eggs descr.); idem, Auk, 23, p. 394, 1906—Grenada and Grenadines (crit., bibliog.); Lowe, Ibis, 1912, p. 526—Grenada (crit.).

*Certhiola atrata* (not of Lawrence) Lawrence, Proc. U. S. Nat. Mus., 1, p. 269, 1878—Grenada; Sclater, Cat. Bds. Brit. Mus., 11, p. 47, 1886—part, spec. b-d, Grenada; Wells, Proc. U. S. Nat. Mus., 9, p. 612, 1886—Grenada (nest and eggs descr.); Cory, Auk, 3, p. 53, 1886—part, Grenada; idem, Bds. W. Ind., p. 67, 1889—part, Grenada.

*Certhiola saccharina* (not of Lawrence) Ridgway, Proc. U. S. Nat. Mus., 5, pp. 28, 30, 1885—part, Grenada; Cory, Auk, 3, p. 50, 1886—part, Grenada; Sclater, Cat. Bds. Brit. Mus., 11, p. 42, 1886—part, descr. and hab., Grenada; Wells, Proc. U. S. Nat. Mus., 9, p. 613, 1886—Grenadines (Isle de Rhonde and Carriacou; nest and eggs descr.); Cory, Bds. W. Ind., p. 64, 1889—part, Grenada.

*Coereba saccharina* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 415, 1902—part, Grenada; Wells, Auk, 19, p. 348, 1902—Carriacou (nest and eggs descr.); Lowe, Ibis, 1912, p. 523—part, Grenada and Grenadines (crit.).

[*Coereba wellsi*] normal form *morrisi* Clark, Proc. Bost. Soc. N. H., 32, p. 293, 1905—Point Saline, Grenada, and Grenadines (crit.).

**Range.**—Island of Grenada and the Grenadines (Bequia, Battowia, Balliceaux, Mustique, Canouan, Mayreau, Union Island, Prune Island, Frigate Rock, Petit Martinique, Tobago Keys, Carriacou, and Isle de Rhonde), Lesser Antilles.

6: Grenada.

**\**Coereba flaveola atrata* (Lawrence).<sup>1</sup> ST. VINCENT BANANAQUIT.**

*Certhiola atrata* Lawrence, Ann. N. Y. Acad. Sci., 1, p. 150, June, 1878—St. Vincent (=melanotic form; type in U. S. National Museum); idem,

tinge. Both forms are possessed with the bright-colored tumid rictus characteristic of all the Antillean Bananaquits. Wing, 57–61, (female) 54–57; tail, 36–38, (female) 33–35; bill, 12–13½.

That the black individuals merely represent a melanotic "phase" appears to me quite certain. The normal form (*morrisi*) has become very rare on the main island of Grenada, where the blackish variety is the dominant one. On the Grenadines, however, only yellow-bellied birds are reported to occur. The type of *D. alerrimum*, when compared to a good series of Grenada skins, is found to agree in every respect. The locality "St. Thomas," cited by Pucheran, is without question erroneous.

**Additional material examined.**—Grenada, 7; Isle de Rhonde, Grenadines, 9.

<sup>1</sup> *Coereba flaveola atrata* (Lawrence) is exceedingly close to *C. f. alerrima*, but may be recognized by its larger size and somewhat longer as well as more robust bill. The normal form (*saccharina*) is identical in coloration, whereas the melanotic form (*atrata*) is of a deeper, more uniform black, very rarely with a faint



Proc. U. S. Nat. Mus., 1, p. 190, 1878—St. Vincent; Lister, Ibis, 1880, p. 40—St. Vincent; Ridgway, Proc. U. S. Nat. Mus., 8, p. 28, 1885—part, St. Vincent; Cory, Ibis, 1886, p. 473—St. Vincent; idem, Auk, 3, p. 53, 1886—part, St. Vincent; Sclater, Cat. Bds. Brit. Mus., 11, p. 47, 1886—part, spec. a, St. Vincent; Cory, Bds. W. Ind., p. 67, 1889—part, St. Vincent; Nicoll, Ibis, 1904, p. 563—St. Vincent (crit.).

*Coereba alrata* Cory, Auk, 8, p. 40, 1891—St. Vincent; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 422, 1902—St. Vincent (monog.); Clark, Proc. Bost. Soc. N. H., 32, p. 292, 1905—St. Vincent (crit., nest and eggs); idem, Auk, 23, p. 393, 1906—St. Vincent (monog.); Lowe, Ibis, 1912, p. 525—St. Vincent (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—St. Vincent.

*Certhiola saccharina* Lawrence, Ann. N. Y. Acad. Sci., 1, No. 5, p. 151, June, 1878—St. Vincent (=normal form; type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 1, p. 190, 1878—St. Vincent; Ridgway, Proc. U. S. Nat. Mus., 8, p. 28, 1885—part, St. Vincent; Cory, Ibis, 1886, p. 473—St. Vincent; idem, Auk, 3, p. 50, 1886—part, St. Vincent; Sclater, Cat. Bds. Brit. Mus., 11, p. 42, 1886—part, St. Vincent; Cory, Bds. W. Ind., p. 64, 1889—part, St. Vincent.

*Coereba saccharina* Cory, Auk, 8, p. 39, 1891—St. Vincent; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 415, 1902—part, St. Vincent; Lowe, Ibis, 1909, p. 309—St. Vincent; idem, Ibis, 1912, p. 523—part, St. Vincent.

*Range*.—Island of St. Vincent, Lesser Antilles.

16: St. Vincent.

**\**Coereba flaveola barbadensis* (Ridgway).<sup>1</sup> BARBADOS BANANAQUIT.**

*Certhiola barbadensis* (Baird MS.) Ridgway, Amer. Natur., 7, p. 612, Oct., 1873—Barbados (type in U. S. National Museum); Ridgway, Proc. U. S. Nat. Mus., 8, p. 28, 1885—Barbados (diag.); Sclater, Cat. Bds. Brit. Mus., 11, p. 46, 1886—Barbados; Cory, Ibis, 1886, p. 472—Barbados; idem, Auk, 3, p. 52, 1886—Barbados (diag.); idem, Bds. W. Ind., p. 66, 1889—Barbados; Feilden, Ibis, 1889, p. 482—Barbados (habits); Nicoll, Ibis, 1904, p. 556—Barbados.

*Coereba barbadensis* Cory, Auk, 8, p. 40, 1891—Barbados (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 420, 1902—Barbados (monog.); Clark, Proc. Bost. Soc. N. H., 32, p. 292, 1905—Barbados (habits); Lowe, Ibis, 1912, p. 522—Barbados (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Barbados (habits).

olivaceous sheen in the middle portion of the lower parts. Wing, 60–64, (female) 57–59; tail, 38–42, (female) 33–36; bill, 14–15.

The normal form (*saccharina*) is believed to be practically extinct nowadays. Lowe saw but a single specimen alive, while neither Clark nor Bond ever met with a yellow-bellied bird. Three skins of that variety in Field Museum were collected by Ober and W. E. Richardson in 1878 and 1886; the two others (undated) were obtained from a dealer. The bright-colored tumid rictus is quite conspicuous in the St. Vincent Bananaquit.

<sup>1</sup> *Coereba flaveola barbadensis* (Ridgway) is closely similar to *C. f. martinicana* and differs chiefly by the lesser amount of white on the throat.

*Certhiola martinicana* (not of Reichenbach) Sclater, Proc. Zool. Soc. Lond., 1874, p. 174—Barbados.

*Range*.—Island of Barbados, Lesser Antilles.

7: Barbados.

**\**Coereba flaveola martinicana* (Reichenbach).<sup>1</sup> MARTINIQUE BANANAQUIT.**

*Certhiola martinicana* Reichenbach, Handb. Spez. Orn., livr. 5, p. 252, pl. 561, fig. 3824, 1853—Martinique (type probably in Dresden Museum); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271 (crit.); Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 788, 1871—Martinique and Santa Lucia (monog.); Sclater, Proc. Zool. Soc. Lond., 1871, p. 269—Santa Lucia; Semper, l.c., 1872, p. 649—Santa Lucia (habits); Ridgway, Amer. Natur., 7, p. 612, 1873—Martinique (diag.); Lawrence, Proc. U. S. Nat. Mus., 1, p. 354, 1879—Martinique; Allen, Bull. Nutt. Orn. Cl., 5, p. 166, 1880—Santa Lucia; Ridgway, Proc. U. S. Nat. Mus., 8, p. 28, 1885—Martinique (diag.); Sclater, Cat. Bds. Brit. Mus., 11, p. 46, 1886—Martinique and Santa Lucia; Cory, Auk, 3, p. 52, 1886—Santa Lucia and Martinique (crit.); idem, Auk, 4, p. 95, 1887—Martinique; idem, Bds. W. Ind., p. 66, 1889—Santa Lucia and Martinique; Sclater, Proc. Zool. Soc. Lond., 1889, p. 395—Santa Lucia; Nicoll, Ibis, 1904, p. 560—Santa Lucia.

*Coereba martinicana* Ridgway, Proc. U. S. Nat. Mus., 12, p. 129, 1890—Santa Lucia; Cory, Auk, 8, p. 40, 1891—Martinique and Santa Lucia (diag.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 421, 1902—Martinique and Santa Lucia (monog.); Lowe, Ibis, 1912, p. 521—same localities (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Santa Lucia.

*Certhiola martinicensis* Sclater, Cat. Bds. Brit. Mus., 11, pl. 5, fig. 1, 1886.

*Certhiola albigula* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 259, 1854—Martinique (type in Paris Museum examined); idem, Not. Orn. Coll. Delattre, p. 57, 1854—Martinique (repr. orig. descr.); Taylor, Ibis, 1864, p. 167—Martinique; Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 624, 1869—Martinique (crit.).

*Certhiola finschi* Ridgway, Proc. U. S. Nat. Mus., 8, pp. 25, 30, 1885—"Dominica" (?), locality unquestionably incorrect (type in U. S. National Museum); Sclater, Cat. Bds. Brit. Mus., 11, p. 47, 1886 (ex Ridgway).<sup>2</sup>

*Certhiola flaveola* (?) (not *Certhia flaveola* Linnaeus) Newton, Ibis, 1862, p. 288—Martinique.

*Certhiola dominicana* (not of Taylor) Cory, Ibis, 1886, p. 475—Santa Lucia.

<sup>1</sup> *Coereba flaveola martinicana* (Reichenbach), in coloration of throat, resembles *C. f. uropygialis*, but differs by blacker upper parts, much shorter superciliaries, and much duller yellow, laterally olive-tinged under parts.

There does not seem to be any constant difference between the birds of the two islands.

<sup>2</sup> The yellow-browed birds described as *C. finschi* are now known to be specifically identical with those having white superciliaries. Similar variation occurs in *C. f. uropygialis*.

*Range*.—Islands of Santa Lucia and Martinique, Lesser Antilles.  
11: Santa Lucia, 8; Martinique, 3.

**\*Coereba flaveola bartholemica (Sparrman).<sup>1</sup> ST. BARTHOLOMEW BANANAQUIT.**

*Certhia bartholemica* Sparrman, Mus. Carlson., fasc. 3, pl. 57, 1788—St. Bartholomew (type in coll. of Fahlberg, Stockholm, probably lost).

*Certhiola bart[h]olemica* Sundevall, Vetensk.-Akad. Handl., 2, No. 3, p. 10, 1857—St. Bartholomew; idem, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 584, 1869—St. Bartholomew (nest and eggs descr.); idem, l.c., p. 622, 1869—St. Bartholomew (monog.); Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 763, 1871—part, St. Bartholomew (monog.); Ridgway, Proc. U. S. Nat. Mus., 8, pp. 28, 30, 1885—St. Bartholomew (diag.); Sclater, Cat. Bds. Brit. Mus., 11, p. 42, 1886—St. Bartholomew; Cory, Auk, 3, p. 50, 1886—St. Bartholomew (diag.); idem, Bds. W. Ind., p. 64, 1889—St. Bartholomew; Sclater, Proc. Zool. Soc. Lond., 1892, p. 499—Anguilla.

*Coereba bartolemica* Cory, Auk, 8, pp. 39, 46, 1891—St. Bartholomew and Anguilla (crit.); idem, Cat. Bds. W. Ind., p. 154, 1892 (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 419, 1902—St. Bartholomew, St. Eustatius, Anguilla, and Saba (monog.); Lowe, Ibis, 1912, p. 518—St. Bartholomew, St. Martins, Anguilla, and Saba (monog.).

*Coereba bartolemica bartolemica* Peters, Auk, 44, p. 537, 1927—Anguilla; Danforth, Auk, 47, p. 47, 1930—St. Martin and St. Eustatius.

*Certhiola dominicana* Taylor, Ibis, 6, p. 167, 1864—Dominica (type in coll. of E. C. Taylor, now in British Museum); Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 623, 1869 (ex Taylor); Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 787, 1871—Dominica (crit.); Lawrence, Proc. U. S. Nat. Mus., 1, pp. 56, 233, 239, 1878—Dominica (nest and eggs), Antigua, and Barbuda; idem, l.c., 1, p. 455, 1879—Guadeloupe (crit.); Sclater, Proc. Zool. Soc. Lond., 1879, p. 765—Montserrat; Grisdale, Ibis, 1882, p. 486—Montserrat; Ridgway, Proc. U. S. Nat. Mus., 8, pp. 28, 30,

<sup>1</sup> *Coereba flaveola bartholemica* (Sparrman) differs readily from *C. f. martinicana* and *C. f. barbadensis* by its uniformly slate-colored throat.

Attempts at subdividing this form into two races have been made by both Ridgway and Lowe, but with a selected series of specimens from most of the islands including topotypes of *bartholemica*, *dominicana*, *frontalis* (= *atlantica*), and *sundevalli* I am unable to verify any of the supposed characters. As has been correctly pointed out by Noble, neither the intensity of the coloration of the lower parts nor the extent of the white superciliaries has any geographical significance, being completely bridged by individual variation among specimens from the same island. There may be possibly a slight tendency to a darker slaty throat in the southern islands (Guadeloupe to Dominica), but even in that respect several birds from St. Kitts cannot be told from others collected in Dominica. The white wing-spot, though perhaps more frequently suggested in examples from St. Bartholomew, St. Kitts, and Anguilla, is too variable a feature to admit more than one form. Birds with partly yellow superciliaries (*sundevalli*) and those with a whitish frontal band (*frontalis*) are not confined to any particular island, and fall within the range of individual variation.

*Additional material examined*.—Guadeloupe (Basse Terre), 5.

1885—Dominica, Antigua, Barbuda, Nevis, St. Eustatius, Guadeloupe, and Saba; Sclater, Cat. Bds. Brit. Mus., 11, p. 44, pl. 5, fig. 2, 1886—Dominica and Montserrat; Cory, Auk, 3, p. 51, 1886—Dominica, Antigua, Barbuda, Nevis, St. Eustatius, Guadeloupe, and Saba (diag., crit.); idem, Ibis, 1886, pp. 473, 474—Marie Galante, La Desirade, and Grande Terre; idem, Bds. W. Ind., p. 65, 1889—Dominica, Antigua, Barbuda, Nevis, St. Eustatius, Guadeloupe, and Saba; Sclater, Proc. Zool. Soc. Lond., 1889, p. 326—Dominica; Verrill, Trans. Conn. Acad. Sci., 8, p. 340, 1892—Dominica (crit., nest and eggs descr.); Nicoll, Ibis, 1904, pp. 569, 572, 573, 574—Dominica (Roseau Harbour), Montserrat, St. Kitts, and Antigua.

*Coereba dominicana* Cory, Auk, 8, p. 39, 1891—Dominica, Marie Galante, Desirade, Barbuda, Nevis, St. Kitts, St. Eustatius, and Saba; idem, Auk, 8, pp. 47, 48, 49, 1891—Antigua, St. Eustatius, St. Christopher, and Guadeloupe; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 417, 1902—Dominica, Guadeloupe, Nevis, Barbuda, Antigua (monog.); Riley, Smiths. Misc. Coll., 47, p. 290, 1904—Barbuda and Antigua; Noble, Bull. Mus. Comp. Zool., 60, p. 389, 1916—Sainte Claude and Sainte Rose, Guadeloupe (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Dominica.

*Coereba bartolemica dominicana* Lowe, Ibis, 1912, p. 520—Dominica, Guadeloupe, Montserrat, Nevis, and St. Christopher (crit.).

*Certhiola frontalis* (Baird MS.) Ridgway, Amer. Natur., 7, p. 612, Oct., 1873—Antigua (type in U. S. National Museum).

*Certhiola sundevalli* Ridgway, Proc. U. S. Nat. Mus., 8, p. 28, 1885—Dominica and Guadeloupe (type from Guadeloupe in U. S. National Museum); Sclater, Cat. Bds. Brit. Mus., 11, p. 44, 1886 (ex Ridgway).

*Coereba atlantica* Lowe, Ibis, (9), 6, p. 519 (in text), 1912—Antigua.

*Certhiola flaveola* (not *Certhia flaveola* Linnaeus) Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 259, 1854—St. Bartholomew (diag.); idem, Not. Orn. Coll. Delattre, p. 51, 1854 (reprint).

**Range.**—Islands of Anguilla, St. Martin, St. Bartholomew, Barbuda, Saba, St. Eustatius, St. Christopher (St. Kitts), Nevis, Antigua, Montserrat, Guadeloupe, La Desirade, Marie Galante, and Dominica, Lesser Antilles.

57: Anguilla, 2; St. Bartholomew, 11; St. Eustatius, 6; St. Christopher (St. Kitts), 13; Antigua, 8; Guadeloupe, 6; La Desirade, 2; Marie Galante, 6; Dominica, 2; Grande Terre, 1.

**\**Coereba flaveola newtoni* Ridgway.<sup>1</sup> ST. CROIX BANANAQUIT.**

*Certhiola newtoni* (Baird MS.) Ridgway, Amer. Natur., 7, p. 611, 1873—St. Croix (type lost, formerly in U. S. National Museum); Ridgway, Proc. U. S. Nat. Mus., 8, pp. 28, 30, 1885—St. Croix (diag.); Cory, Auk,

<sup>1</sup> *Coereba flaveola newtoni* (Ridgway), by possessing a conspicuous white alar speculum, approaches *C. f. portoricensis* and *C. f. sancti-thomae*, but may be distinguished by much darker slaty throat and duller, more olive-yellow uropygial area.

3, p. 51, 1886—St. Croix (diag.); Sclater, Cat. Bds. Brit. Mus., 11, p. 43, 1886—St. Croix; Cory, Bds. W. Ind., p. 65, 1889—St. Croix; Nicoll, Ibis, 1904, p. 575—St. Croix.

*Coereba newtoni* Cory, Auk, 8, p. 39, 1891—St. Croix (diag.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 416, 1902—St. Croix; Lowe, Ibis, 1912, p. 513—St. Croix (monog.); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 502, 1927—St. Croix.

*Certhiola flaveola* (?) (not *Certhia flaveola* Linnaeus) Newton, Ibis, 1859, p. 67, pl. 12, fig. 3 (egg)—St. Croix; Sclater, Cat. Coll. Amer. Bds., p. 54, 1862—part, spec. e-h, St. Croix.

*Certhiola* sp. Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 623, 1869—St. Croix (crit.).

*Certhiola bartholemica* (not *Certhia bartholemica* Sparrman) Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 763, 1871—part, St. Croix.

*Range*.—Island of St. Croix, Greater Antilles.

25: St. Croix.

**\**Coereba flaveola sancti-thomae* (Sundevall).<sup>1</sup> VIRGIN ISLANDS  
BANANAQUIT.**

*Certhiola s:ti Thomae*<sup>2</sup> [sic] Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 621, 1869—based on *Certhiola flaveola* Newton (Ibis, 1859, p. 68) ex St. Thomas.

*Certhiola sancti-thomae* Ridgway, Proc. U. S. Nat. Mus., 8, pp. 28, 29, 1885—St. Thomas and St. John (type from St. Thomas in U. S. National Museum); Cory, Auk, 3, p. 48, 1886—St. Thomas and St. John (crit.); Sclater, Cat. Bds. Brit. Mus., 11, p. 42, 1886—St. Thomas; Cory, Bds. W. Ind., p. 62, 1889—St. Thomas and St. John (crit., variation).

*Certhiola flaveola* (not *Certhia flaveola* Linnaeus) Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 377—St. Thomas; idem, l.c., 1864, p. 271—part, St. Thomas; Sclater, Cat. Coll. Amer. Bds., p. 54, 1862—part, spec. b, St. Thomas.

*Certhiola portoricensis* (not of Bryant) Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 760, 1871—part, St. Thomas (crit.); Ridgway, Amer. Natur., 7, p. 611, 1873—part, St. Thomas; idem, Proc. U. S. Nat. Mus., 7, p. 172, 1884—St. Thomas; Cory, Auk, 3, p. 48, 1886—part, St. Thomas; Nicoll, Ibis, 1904, p. 576—St. Thomas.

*Coereba dominicensis* (not *C. dominicana* Taylor) Cory, Auk, 7, p. 374, 1890—Anegada.

*Coereba portoricensis* Cory, Auk, 7, pp. 374, 375, 1890—St. Thomas, Tortola, and Virgin Gorda; idem, Auk, 8, p. 38, 1891—part, Culebra, Anegada,

<sup>1</sup> *Coereba flaveola sancti-thomae* (Sundevall): Very close to *C. f. portoricensis*, but under parts generally of a brighter, clearer yellow and flanks somewhat paler. Certain specimens from Virgin Gorda approach *C. f. newtoni* in the dull olive-yellow rump, but their throats are markedly paler.

<sup>2</sup> The specific name, though not printed in italics, appears to be intended as a Latin term for the St. Thomas bird characterized by Newton.

Tortola, Virgin Gorda, St. Thomas, and St. John; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 412, 1902—part, Vieques, Culebra, Anegada, Tortola, Virgin Gorda, St. Thomas, and St. John; Lowe, Ibis, 1912, p. 512—part, Vieques, Culebra, St. Thomas, and Virgin Islands (crit.); Wetmore, Auk, 33, p. 418, 1916—Vieques; idem, Auk, 34, pp. 55, 62, 1917—Culebra, Culebrita, and Louis Peña.

*Coereba portoricensis sancti-thomae* Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 501, 1927—Virgin Islands (crit.).

**Range.**—Virgin Islands (islands of Vieques, Culebra, Culebrita, Louis Peña, St. Thomas, St. John, Virgin Gorda, Tortola, and Anegada), Greater Antilles.

60: St. Thomas, 5; St. John, 1; Virgin Gorda, 25; Tortola, 4; Anegada, 25.

**\*Coereba flaveola portoricensis** (Bryant).<sup>1</sup> PORTO RICAN BANANAQUIT.

*Certhiola flaveola* var. *portoricensis* Bryant, Proc. Bost. Soc. N. H., 10, p. 252, 1866—Porto Rico (type in U. S. National Museum).

*Certhiola portoricensis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, pp. 598, 622, 1869—Porto Rico (monog.); Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 760, 1871—part, Porto Rico (crit.); Ridgway, Amer. Natur., 7, p. 611, 1873—part, Porto Rico; Gundlach, Journ. Orn., 22, p. 312, 1874—Porto Rico; idem, l.c., 26, p. 179, 1878—Porto Rico (habits, nest and eggs descr.); idem, Anal. Soc. Esp. Hist. Nat., 7, p. 216, 1878—Porto Rico; Ridgway, Proc. U. S. Nat. Mus., 8, pp. 28, 29, 1885—Porto Rico; Cory, Auk, 3, p. 48, 1886—part, Porto Rico; Sclater, Cat. Bds. Brit. Mus., 11, p. 41, 1886—Porto Rico; Cory, Bds. W. Ind., p. 62, 1889—part, Porto Rico.

*Coereba portoricensis* Cory, Auk, 8, p. 38, 1891—part, Porto Rico; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 412, 1902—part, Porto Rico; Bowditch, Auk, 20, p. 17, 1903—Porto Rico (habits); Lowe, Ibis, 1912, p. 512—part, Porto Rico (crit.); Wetmore, Bull. U. S. Dept. Agric., 326, p. 109, 1916—Porto Rico (habits, food); Struthers, Auk, 40, p. 477, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 115, 1926—Cartagena Lagoon (habits).

*Coereba portoricensis portoricensis* Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 498, 1927—Porto Rico (life history).

*Nectarinia flaveola* (not *Certhia flaveola* Linnaeus) Moritz, Arch. Naturg., 2, p. 387, 1836—Porto Rico.

*Certhiola flaveola* Taylor, Ibis, 1864, p. 166—Porto Rico.

**Range.**—Island of Porto Rico, Greater Antilles.

54: Porto Rico (Mayagüez, 54).

<sup>1</sup> *Coereba flaveola portoricensis* (Bryant), while similar in general to *C. f. bananivora*, may be distinguished by blacker upper parts; clearer slate-gray throat; much longer white tips to lateral rectrices, etc.

**\*Coereba flaveola bananivora (Gmelin). HAITIAN BANANAQUIT.**

*Motacilla bananivora* Gmelin, Syst. Nat., 1, (2), p. 951, 1789—based on "Bananiste" Buffon, Hist. Nat. Ois., 5, p. 332; Santo Domingo.

*Certhiola bananivora* Bryant, Proc. Bost. Soc. N. H., 11, p. 95, 1867—Santo Domingo; Ridgway, Amer. Natur., 7, p. 612, 1873—Haiti and Santo Domingo (diag.); idem, Proc. U. S. Nat. Mus., 8, pp. 28, 30, 1885—Haiti (diag.); Cory, Bds. Haiti and San Domingo, p. 41, pl. [21], fig. 1, 1885—Santo Domingo (Samaná, Puerto Plata) and Haiti (Le Coup); Cory, Auk, 3, p. 49, 1886—Santo Domingo (crit.); Sclater, Cat. Bds. Brit. Mus., 11, p. 40, 1886—Samaná, Santo Domingo; Cory, Bds. W. Ind., p. 63, 1889—Santo Domingo; Christy, Ibis, 1897, p. 321—Sánchez and La Vega, Santo Domingo (tongue, food).

*Coereba bananivora* Cory, Auk, 8, p. 38, 1891—Haiti and Santo Domingo; Cherrie, Field Columb. Mus., Orn. Ser., 1, p. 12, 1896—Santo Domingo City (crit., habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 411, 1902—Haiti (monog.); Verrill and Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 364, 1909—Dominican Republic; Lowe, Ibis, 1912, p. 511—Haiti (monog.); Peters, Bull. Mus. Comp. Zool., 61, p. 423, 1917—Monte Cristi and Sosúa, Dominican Republic; Kaempfer, Journ. Orn., 72, p. 184, 1924—Santo Domingo (habits); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 511, 1928—Haiti (habits); Danforth, Auk, 46, p. 372, 1929—Hato Mayor, San Juan, and Gonave; Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 322, 1929—Haina and San Juan, Haiti.

*Coereba bananivora bananivora* Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 363, 1931—Hispaniola, Gonave, and Petite Cayemite (life history); idem, Proc. U. S. Nat. Mus., 81, art. 2, p. 33, 1932—Gonave Island, Baradère Peninsula, Petite Cayemite Island, Bug Island (near Corail), and Ile à Vache (crit.).

*Certhiola clusiae* (Württemberg MS.)<sup>1</sup> Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 771, 1871—Santo Domingo (type in Bremen Museum).

*Certhiola clusiae* Cory, Bull. Nutt. Orn. Cl., 6, p. 151, 1881—Pétionville, Haiti.

*Certhiola* — (?) Sclater, Proc. Zool. Soc. Lond., 25, p. 233, 1857—Haiti.

**Range.**—Island of Hispaniola, including Gonave, Petite Cayemite, Bug, and Vache Island, Greater Antilles.

78: Haiti (Le Coup, 4; Kenskoff, 1; Jacmel, 1; Aux Cayes, 1); Dominican Republic (Santo Domingo City, 20; Maniel, 1; Aguacate, 13; Catare, 8; Puerto Plata, 18; Samaná, 11).

**Coereba flaveola nectarea Wetmore.<sup>2</sup> TORTUE ISLAND BANANAQUIT.**

<sup>1</sup> *Certhiola clusiae*, as published by Hartlaub (Naumannia, 2, Heft 2, p. 56, 1852), is a nomen nudum.

<sup>2</sup> *Coereba flaveola nectarea* Wetmore, unknown to the writer, is stated to be similar to *C. f. bananivora*, but to differ by having the throat and foreneck slightly darker gray.

*Coereba bananivora nectarea* Wetmore, Proc. Biol. Soc. Wash., 42, p. 118, 1929—Tortue Island, Haiti (type in U. S. National Museum); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 366, 1931—Tortue Island.

*Range*.—Tortue Island, north of Haiti, Greater Antilles.

\**Coereba flaveola flaveola* (Linnaeus).<sup>1</sup> JAMAICAN BANANAQUIT.

*Certhia flaveola* Linnaeus, Syst. Nat., 10th ed., 1, p. 119, 1758—based upon "Luscinia s. Philomela e fusco et luteo varia" Sloane (Nat. Hist. Jamaica, 2, p. 307, pl. 259, fig. 3) and "The Black and Yellow Creeper" Edwards (Nat. Hist. Bds., 3, p. 122, pl. 122, left fig.), Jamaica; Denny, Proc. Zool. Soc. Lond., 15, p. 39, 1847—Jamaica and Cuba(!).

*Coereba flaveola* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 70, 1807 (in part); Cory, Auk, 8, p. 38, 1891—Jamaica (diag.); Scott, Auk, 10, p. 339, 1893—Boston, Jamaica; Field, Auk, 11, p. 127, 1894—Port Henderson, Jamaica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 414, 1902—Jamaica (monog.); Lowe, Ibis, 1912, p. 511—Jamaica (monog.); Danforth, Auk, 45, p. 489, 1928—Jamaica.

*Certhiola flaveola* Gosse, Bds. Jamaica, p. 84, 1847—Jamaica (habits, nest, and eggs); Newton, Ibis, 1859, p. 67—part, Jamaica (crit.); Sclater, Proc. Zool. Soc. Lond., 1861, p. 73—Jamaica; idem, Cat. Coll. Amer. Bds., p. 54, 1862—part, spec. c, d, Jamaica; March, Proc. Acad. Nat. Sci. Phila., 1863, p. 296—Jamaica (nest and eggs descr.); Cassin, I.c., 1864, p. 271—part, Jamaica; Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 621, 1869—Jamaica (monog.); Finsch, Verh. Zool. Bot. Ges. Wien, 21, p. 756, 1871—Jamaica (monog.); Ridgway, Amer. Natur., 7, p. 611, 1873—Jamaica (diag.); idem, Proc. U. S. Nat. Mus., 8, pp. 28, 30, 1885—Jamaica (diag.); Cory, Auk, 3, p. 50, 1886—Jamaica (diag.); Sclater, Cat. Bds. Brit. Mus., 11, p. 43, 1886—Jamaica; idem, Bds. W. Ind., p. 64, 1889—Jamaica; Nicoll, Ibis, 1904, p. 577—Kingston, Jamaica.

*Certhiola minor* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 259, 1854—no locality stated (the type, examined in the Paris Museum, is from Jamaica); idem, Not. Orn. Coll. Delattre, p. 51, 1854 (reprint of orig. descr.).

*Range*.—Island of Jamaica, Greater Antilles.

32: Jamaica (Priestman's River, 3; unspecified, 29).

\**Coereba flaveola bahamensis* (Reichenbach).<sup>2</sup> BAHAMA BANANAQUIT.

*Certhiola bahamensis* Reichenbach, Handb. Spez. Orn., livr. 5, p. 253, 1853—based on "The Bahama Titmouse" Catesby, Nat. Hist. Carolina, etc.,

<sup>1</sup> *Coereba flaveola flaveola* (Linnaeus) differs from *C. f. bananivora* chiefly by darker, more blackish slate gular area; deeper, brownish or wax yellow chest; deep black, instead of sooty blackish, upper parts; and more extensive white alar speculum.

*Additional material examined*.—Jamaica: Kingston, 3; St. Andrews, 3.

<sup>2</sup> *Coereba flaveola bahamensis* (Reichenbach) differs from the other races found in the western part of the Caribbean Sea by the lesser extent of yellow underneath and the buffy grayish abdomen.



1, p. 59, pl. 59, Bahama Islands; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271 (ex Catesby); Bryant, Proc. Bost. Soc. N. H., 11, p. 66, 1866—Inagua; Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 624, 1869—Bahamas; Finsch, Verh. Zool. Bot. Gesells. Wien, 21, p. 752, 1871—Indian Key and Inagua, Bahamas (monog.); Ridgway, Amer. Natur., 7, p. 612, 1873—Bahamas and Florida Keys; Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 428, pl. 19, fig. 5, 1874; Cory, Auk, 3, p. 47, 1886—Bahamas (diag.); Ridgway, Proc. U. S. Nat. Mus., 5, pp. 27, 29, 1885—Bahamas and coast of southern Florida; Sclater, Cat. Bds. Brit. Mus., 11, p. 37, 1886—Inagua and New Providence; Cory, Bds. W. Ind., p. 61, 1889; idem, Bds. Bahama Is., p. 76, 1890—Bahamas.

*Certhiola bairdii* Cabanis, Journ. Orn., 13, p. 412, 1865—based on *Certhiola flaveola* (not *Certhia flaveola* Linnaeus) Baird, Rep. Pac. R. R. Surv., 9, p. 924, 1858, and idem, Bds. N. Amer., pl. 83, fig. 3, 1860; Indian Key, Florida (type in U. S. National Museum); Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, p. 621, 1869 (ex Baird).

*Coereba bahamensis* Cory, Auk, 8, p. 37, 1891—Bahamas; Northrop, l.c., 8, p. 70, 1891—Andros; Cory, l.c., 8, pp. 294, 295, 296, 297, 298, 350, 351, 1891—New Providence, Caicos, Inagua, Abaco, Berry Islands, Bimini Islands, Great Bahama, and Eleuthera; Ridgway, l.c., 8, pp. 334, 335, 336, 337, 338, 339, 1891—Abaco, New Providence, Eleuthera, Cat Island, Watlings, Rum Cay, Green Cay, and Concepción; Bonhote, Ibis, 1899, p. 511—Nassau, New Providence; Bangs, Auk, 17, p. 293, 1900—New Providence (Nassau), Current Island, and Highbourne Cay; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 401, 1902—Bahamas (monog.); Bonhote, Ibis, 1903, p. 286—Nassau (New Providence), Andros (Grassy Creek), and Little Abaco; Riley, in Shattuck, The Bahama Islands, pp. 355, 367, 1905—Bahamas; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 438, 463, 1911—New Providence (Blue Hills), Great Inagua (Mathewtown), Andros (Staniard Creek), and Abaco (Spencer's Point); Lowe, Ibis, 1912, p. 514—Bahamas (crit.); Nichols, Auk, 38, p. 461, 1921—Miami, Florida (one specimen seen Feb. 7, 1921).

*Range*.—Bahama Islands (from Great Bahama and Little Abaco south to Inagua and the Caicos Islands); accidental on the east coast of Florida (one sight record from Miami, Feb. 7, 1921) and the Keys (Indian Key, Jan. 31, 1858).<sup>1</sup>

272: Bahama Islands (Great Bahama, 23; Abaco, 10; Bimini, 5; Berry, 8; New Providence [Nassau], 14); Andros, 30; Eleuthera, 21; Cat, 1; Watlings, 13; Mariguana, 62; Caicos, 16; Inagua, 69).

**\**Coereba flaveola sharpei* (Cory).<sup>2</sup> SHARPE'S BANANAQUIT.**

<sup>1</sup> Though a certain difference in the length of the bill is observable between specimens from various islands, those from Great Inagua and the Caicos being particularly long-billed, I agree with Mr. Todd that subdivision of *bahamensis* is unwarranted.

<sup>2</sup> *Coereba flaveola sharpei* (Cory) is closely related to *C. b. caboti*, but differs by larger bill; less extensive as well as duller yellow uropygial area; decidedly smoke-gray instead of pale drab-gray throat, this color also extending onto the upper

*Certhiola sharpei* Cory, Auk, 3, p. 497, 1886—Grand Cayman (type in coll. of C. B. Cory, now in Field Museum); idem, l.c., 3, p. 501, 1886—Grand Cayman; idem, l.c., 5, p. 157, 1888—Grand Cayman; idem, l.c., 6, p. 31, 1889—Little Cayman and Cayman Brac; Ridgway, Proc. U. S. Nat. Mus., 10, p. 574, 1887—Grand Cayman; Nicoll, Ibis, 1904, pp. 580, 587—Grand Cayman and Little Cayman.

*Coereba sharpei*(ii) Cory, Auk, 8, p. 37, 1891—Grand Cayman, Little Cayman, and Cayman Brac (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 404, 1902—Cayman Islands (monog.); Lowe, Ibis, 1909, p. 345—Grand Cayman (crit.); idem, Ibis, 1911, p. 160—Cayman Islands; idem, Ibis, 1912, p. 515—Cayman Islands (monog.); English, Ibis, 1916, p. 34—Grand Cayman (breeding habits); Bangs, Bull. Mus. Comp. Zool., 60, p. 316, 1916—Grand Cayman, Little Cayman, and Cayman Brac (crit.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 18, 1931—Grand Cayman.

*Range*.—Islands of Grand Cayman, Little Cayman, and Cayman Brac, Greater Antilles (south of Cuba).

118: Grand Cayman, 63; Little Cayman, 13; Cayman Brac, 42.

**\**Coereba flaveola tricolor* (Ridgway).<sup>1</sup> OLD PROVIDENCE BANANAQUIT.**

*Certhiola tricolor* Ridgway, Proc. U. S. Nat. Mus., 7, No. 12, p. 178, July, 1884—Old Providence, Caribbean Sea (type in U. S. National Museum); idem, l.c., 8, pp. 27, 29, 1885—Old Providence; Selater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—Old Providence; Cory, Auk, 4, p. 180, 1887—Old Providence.

*Coereba tricolor* Cory, Auk, 8, p. 40, 1891—part, Old Providence; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 405, 1902—part (descr. and hab., Old Providence); Lowe, Ibis, 1912, p. 517—Old Providence (monog.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 18, 1931—Old Providence.

*Range*.—Old Providence Island, Caribbean Sea.

20: Old Providence Island.

**\**Coereba flaveola oblita* Griscom.<sup>2</sup> ST. ANDREWS BANANAQUIT.**

chest; much larger white tips to the lateral rectrices, involving both webs. Besides, the black space on lores and auriculars appears to be generally more restricted.

The late Outram Bangs noticed between birds from Grand Cayman and those from the two other islands certain differences which he thought might be seasonable. Our own material does not help toward elucidating this point, most of the specimens collected on the smaller islands being badly discolored by Maynard's "dermal preservative."

<sup>1</sup> *Coereba flaveola tricolor* (Ridgway): Similar to *C. b. sharpei* in having the gular area decidedly smoke gray and produced over the upper chest; but larger (wing of male, 64–68, against 60–63) with proportionately shorter bill; yellow uropygial area on average brighter.

<sup>2</sup> *Coereba flaveola oblita* Griscom: Exceedingly close to *C. b. tricolor*, but larger; gray gular area slightly darker and more extended over the chest; yellow of breast rather paler, more of a greenish yellow; flanks slightly more grayish olive; bill shorter. Wing, 69–74, (female) 62–65; tail, 47–50, (female) 42–45; bill, 12–13.

*Coereba oblita* Griscom, Amer. Mus. Nov., 71, p. 7, 1923—St. Andrews, Caribbean Sea (type in Field Museum); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 18, 1931—St. Andrews (nest and egg descr.).

*Certhiola tricolor* (not of Ridgway) Cory, Auk, 4, p. 181, 1889—St. Andrews.

*Coereba tricolor* Cory, Auk, 8, p. 40, 1891—part, St. Andrews; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 405, 1902—part, St. Andrews.

*Range*.—Island of St. Andrews, Caribbean Sea.

6: Island of St. Andrews.

**\**Coereba flaveola caboti* (Ridgway).<sup>1</sup> COZUMEL BANANAQUIT.**

*Certhiola caboti* (Baird MS.) Ridgway,<sup>2</sup> Amer. Natur., 7, p. 612, 1873—Cozumel Island (type in coll. of S. Cabot, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Auk, 32, p. 170, 1915); Salvin, Ibis, 1874, p. 327—Cozumel (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 251, pl. 15a, fig. 4, 1883—Cozumel; Ridgway, Proc. U. S. Nat. Mus., 5, pp. 27, 29, 564, 1885—Cozumel (crit.); Sclater, Cat. Bds. Brit. Mus., 11, p. 38, 1886—Cozumel; Salvin, Ibis, 1888, p. 257—Cozumel and Holbox Islands (crit.).

*Coereba caboti* Cory, Auk, 8, p. 41, 1891—Cozumel (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 404, 1902—Cozumel (monog.); Lowe, Ibis, 1912, p. 516—Cozumel (monog.); Griscom, Amer. Mus. Nov., 236, p. 12, 1926—Cozumel.

*Range*.—Islands of Cozumel and Holbox,<sup>3</sup> off Yucatan.

6: Cozumel Island.

**Genus ATELEODACNIS Cassin**

*Ateleodacnis* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—type, by subs. desig. (Sclater, Cat. Bds. Brit. Mus., 11, p. 18, 1886), *Dacnis leucogenys* Lafresnaye.

**\**Ateleodacnis speciosa speciosa* (Temminck). CHESTNUT-VENTED ATELEODACNIS.**

*Sylvia speciosa* (Wied MS.) Temminck, Nouv. Rec. Pl. Col., livr. 49, pl. 293, fig. 2, 1824—Rio de Janeiro (descr. male; type in coll. of Prince Wied,<sup>4</sup> now

<sup>1</sup> *Coereba flaveola caboti* (Ridgway), while agreeing in large size with the other races of the western Caribbean Sea, nevertheless betrays a certain tendency in the direction of *C. f. mexicana* by the restriction of the pale drab-gray gular area to the throat proper and the distribution of the white on the lateral rectrices, this color being practically limited to the inner vane of the feathers, as in the continental representatives. There does not seem to be a bright-colored tumid rictus either, so far as I can determine from the few specimens at hand.

<sup>2</sup> The name as published by Finsch (Verhandl. Zool. Bot. Ges. Wien, 21, p. 790, 1871) is a nomen nudum.

<sup>3</sup> No material seen from Holbox. According to Salvin (Ibis, 1888, p. 257), two females resemble Cozumel specimens of the same sex. The island is not mentioned by Lowe in his monograph of the genus.

<sup>4</sup> Cf. Wied, Beitr. Naturg. Bras., 3, (2), p. 710, 1831.

- in the American Museum of Natural History, New York); Wied, Beitr. Naturg. Bras., 3, (2), p. 708, 1831—Rio de Janeiro and Angicos, Bahia.
- Dacnis analis* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 21, 1837—Chiquitos, Bolivia (descr. male; type in Paris Museum examined); Sclater, Contrib. Orn., 1851, p. 109—Chiquitos (ex d'Orbigny); Snethlage, Journ. Orn., 55, p. 292, 1907—Marajó; Hellmayr, Nov. Zool., 28, p. 248, 1921 (crit.).
- Sylvia erythropus* Descourtillz, Orn. Brés., Part 4, p. 37, pl. 42, fig. 2, 1856—Rio de Janeiro (location of type not stated).
- Sylvicola speciosa* Burmeister, Syst. Uebers. Th. Bras., 3, p. 117, 1856—Rio de Janeiro to Bahia.
- Dacnis speciosa* Sclater, Contrib. Orn., 1852, p. 101—part, Rio de Janeiro and Chiquitos; idem, Proc. Zool. Soc. Lond., 22, p. 252, 1854—Brazil and Bolivia; idem, Cat. Coll. Amer. Bds., p. 52, 1862—part, spec. a, b, Bolivia; idem, Ibis, 1863, p. 317—part, Bolivia (Chiquitos) and Brazil; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—part, Brazil; Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Sapitiba (Rio de Janeiro), Rio Paraná (São Paulo) and Cuyabá (Matto Grosso); Sclater, Cat. Bds. Brit. Mus., 11, p. 26, 1886—southeastern Brazil; Allen, Bull. Amer. Mus. N. H., 2, p. 217, 1889—Rio de Janeiro (note on type); idem, l.c., 3, p. 346, 1891—Chapada and Corumbá, Matto Grosso; Ihering, Rev. Mus. Paul., 3, p. 142, 1899—southeastern Brazil; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 3, 1900—Carandásinho, Matto Grosso; Lillo, Apunt. Hist. Nat., 1, p. 43, 1909—Ledesma, Jujuy; Chubb, Ibis, 1910, p. 619—Sapucay, Paraguay; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 86, 1910—Bahia (Carnahyba, Fazenda da Porteira and Santa Rita, Rio Preto) and Piahy (Parnaguá, Pedrinha, Burití, União, Queimadas); Snethlage, Bol. Mus. Goeldi, 8, p. 465, 1914—Illa do Marajó (Rio Arary, São Natal, Pacoval, Chaves); Dabbene, Bol. Soc. Physis, 1, p. 360, 1914—Ledesma (Jujuy), Misiones, and Chaco; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará.
- Ateleodacnis speciosa* Oberholser, Proc. U. S. Nat. Mus., 25, p. 140, 1902—Sapucay, Paraguay; Ihering and Ihering, Cat. Faun. Braz., 1, p. 334, 1907—Salto Grande do Rio Paranapanema and Rio Feio (São Paulo), and Bahia; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 370, 1910—Ledesma, Jujuy; idem, l.c., 23, p. 349, 1912—Mburero, Paraguay; Bertoni, Faun. Parag., p. 60, 1914—Alto Paraná and Asunción, Paraguay; idem, El Hornero, 3, p. 400, 1926 (food).
- Ateleodacnis speciosa speciosa* Hellmayr, Nov. Zool., 28, p. 248, 1921—Chiquitos, Bolivia (crit., range); Wetmore, Bull. U. S. Nat. Mus., 133, p. 372, 1926—Las Palmas, Chaco, and west of Puerto Pinasco, Paraguay; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 191, 1926—Marechal Mallet, Candido de Abreu, and Salto Guayra, Paraná; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 268, 1929—Maranhão (Barra do Corda and Codó, Cocos) and Piahy (Deserto, Ibiapaba); Naumburg, Bull. Amer. Mus. N. H., 60, p. 364, 1930—Paraguay (Fort Wheeler, Trinidad) and Matto Grosso (Urucúm, Rio São Lourenço).

*Dacnis brevipennis* (not *Helinaia brevipennis* Giraud) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271—part (=female).

**Range.**—The greater part of the tableland of Brazil, from the Island of Marajó in the estuary of the Amazon, the interior of Maranhão and Piauí south to Matto Grosso and northern São Paulo; eastern Bolivia; Paraguay; northern Argentina (Ledesma, Jujuy; Chaco; Misiones).<sup>1</sup>

8: Brazil (Barra do Corda, Maranhão, 2; Codó, Cocos, Maranhão, 2; Deserto, Piauí, 1; Ibiapaba, Piauí, 1; Juá, near Iguatú, Ceará, 1; Urucúm de Corumbá, Matto Grosso, 1).

***Ateleodacnis speciosa amazonum* Hellmayr.<sup>2</sup> AMAZONIAN ATELEODACNIS.**

*Ateleodacnis speciosa amazonum* Hellmayr, Verh. Orn. Ges. Bay., 13, p. 106, Feb., 1917—Tarapoto, Huallaga drainage, northern Peru (type in Berlepsch Collection, now in Frankfurt Museum); idem, Nov. Zool., 28, p. 248, 1921 (crit., range); Chapman, Bull. Amer. Mus. N. H., 55, p. 645, 1926—Rio Suno, eastern Ecuador.

*Dacnis speciosa* (not *Sylvia speciosa* Wied) Sclater, Contrib. Orn., 1852, p. 101—part, Cayenne; idem, Cat. Coll. Amer. Bds., p. 52, 1862—part, spec. c, Berbice; idem, Ibis, 1863, p. 317—part, British Guiana and Amazon Valley; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—part ("dark specimen"); Pelzeln, Orn. Bras., 1, p. 26, 1868—part, Forte do São Joaquim, Rio Branco, and Rio Amazonas (spec. examined); (?) Snethlage, Journ. Orn., 56, pp. 498, 521, 1908—Ilha Goyana, Tapajóz, and Arumatheua, Tocantins, Brazil; Berlepsch, Nov. Zool., 15, p. 111, 1908—Cayenne (ex Sclater).

*Dacnis brevipennis* (not *Helinaia brevipennis* Giraud) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 271—part, Cayenne (=female).

<sup>1</sup> Specimens from eastern Bolivia (*D. analis*) are inseparable from typical *speciosa*, as represented by a Brazilian series. A single male (in juvenile molt) from Marajó is likewise similar to east Brazilian birds in corresponding plumage, being very much paler than the Amazonian form.

**Additional material examined.**—Brazil: Natal, Marajó, 1; Piauí, Buriti, 2; Parnaguá, 1; Pedrinha, 1; União, Rio Parnahyba, 1; Queimadas, Rio Parnahyba, 1; Bahia, Carnahyba, Joazeiro, 1; Rio Preto, 2; Bahia, 5; Agua Suja, near Bagagem, Minas Geraes, 1; Nova Friburgo, Rio, 1; Sapitiba, Rio, 1; Cuyabá, Matto Grosso, 1.—Bolivia: Chiquitos, 1; Santa Cruz, 1; Quebrada Onda, Dept. Cochabamba, 4.

<sup>2</sup> *Ateleodacnis speciosa amazonum* Hellmayr: Male similar to *A. s. speciosa*, but much darker throughout; the upper parts much darker, more purplish blue; lower surface deep slaty blue, the white abdominal area at best suggested by some whitish fringes; female not certainly distinguishable. Wing, 54–59, (female) 52; tail, 40–42, (female) 36; bill, 9–10.

This dark form obviously ranges throughout the Amazon Valley from the confines of British Guiana to the eastern base of the Andes. Two adult males from the upper Rio Branco (Forte do São Joaquim) are, as far as I can see, inseparable from Peruvian specimens, while one from "Bogotá" is even darker underneath. No material is available from the southern bank of the lower Amazon.

**Material examined.**—Colombia: "Bogotá," 1.—Ecuador: Rio Suno, 1.—Peru: Tarapoto, 1; Pintobamba, 1.—Brazil: Forte do Rio Branco, 4; Rio Amazonas, 1.

*Dacnis analis* (not of Lafresnaye and d'Orbigny) Sclater and Salvin, Proc. Zool. Soc. Lond., 1866, p. 179—upper Ucayali, Peru; idem, l.c., 1873, p. 259—upper Ucayali; Taczanowski, Orn. Pér., 1, p. 432, 1884—upper Ucayali, Peru; Sclater, Cat. Bds. Brit. Mus., 11, p. 25, 1886—Cayenne, "Bogotá," upper Ucayali, Huambo, and (?) Maranura,<sup>1</sup> Peru; Berlepsch, Journ. Orn., 37, p. 294, 1889—Tarapoto, Peru; Ihering and Ihering, Cat. Faun. Braz., 1, p. 335, 1907—part, Guiana, Amazonia, and Peru; (?) Snethlage, Bol. Mus. Goeldi, 8, p. 464, 1914—Rio Tocantins (Arumathæua), Rio Tapajóz (Goyana), and Ereré (Igarapé and Serra de Paituna), Brazil.

(?) *Conirostrum* sp. inc. Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 17—Maranura, Urubamba, Dept. Cuzco, Peru.<sup>1</sup>

**Range.**—Amazonia, from the eastern base of the eastern Andes of Colombia ("Bogotá" collections) south to northern Peru (Ucayali; Tarapoto; Huambo; Pintobamba) and east through the Amazonian lowlands to northern Brazil (Forte do São Joaquim, Rio Branco; (?) Tapajóz and Tocantins rivers), British and French Guiana.

***Ateleodacnis leucogenys*<sup>2</sup> *panamensis* Griscom.<sup>3</sup> PANAMA  
ATELEODACNIS.**

*Ateleodacnis leucogenys panamensis* Griscom, Amer. Mus. Nov., 282, p. 9, 1927—Cape Garachiné, eastern Panama (type in the American Museum of Natural History, New York).

**Range.**—Tropical zone of eastern Panama (Cape Garachiné, Gulf of San Miguel, Darien).

***Ateleodacnis leucogenys leucogenys* (Lafresnaye). WHITE-EARED ATELEODACNIS.**

*Dacnis leucogenys* Lafresnaye, Rev. Mag. Zool., (2), 4, p. 470, 1852—"Columbia"—Bogotá (descr. male; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); Sclater, Proc. Zool. Soc. Lond., 23, p. 138, 1855—Bogotá; idem, Ibis, 1863, p. 317—Bogotá (descr. male); Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—Venezuela (crit.); Berlepsch, Journ.

<sup>1</sup> Without adult males it is impossible to decide whether the single female from Maranura belongs to *A. s. speciosa* or *A. s. amazonum*.

<sup>2</sup> *Ateleodacnis leucogenys* is possibly conspecific with *A. speciosa*.

<sup>3</sup> *Ateleodacnis leucogenys panamensis* Griscom: "Similar to *A. l. leucogenys* of Colombia, but adult males much darker both above and below, the general color dark Payne's gray instead of Payne's gray; females slightly darker above, with little or no tinge of green." (Griscom, l.c.).

We are not acquainted with this race, which, judging from the description, would seem to be somewhat intermediate in the coloration of the under parts between typical *leucogenys* and *cyanochrous*. Although the author makes no reference to the last-named form, it can hardly be the same in view of its widely separated habitat, since *A. l. leucogenys* occupies the intervening section of northern Colombia.

Orn., 21, p. 69, 1873—New Granada (Bogotá, Aguachica) and Venezuela; Sclater, Cat. Bds. Brit. Mus., 11, p. 25, 1886—Bogotá; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 51, 1912—Cumbre Chiquita and Las Quiguas, Carabobo, Venezuela (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 585, 1917—Algodonal (near Banco) and Honda, Magdalena River, Colombia.

*Ateleodacnis leucogenys* Todd and Carriker, Ann. Carnegie Mus., 14, p. 455, 1922—Fundación, Tucurínca, and Valencia, Santa Marta region (crit., habits).

*Ateleodacnis leucogenys leucogenys* Darlington, Bull. Mus. Comp. Zool., 71, p. 413, 1931—Rio Frio, Magdalena, Colombia.

*Dacnis humeralis* (lapsu) Wyatt, Ibis, 1871, p. 324—Aguachica, above Puerto Nacional, Colombia.

**Range.**—Tropical zone of Colombia (valleys of the Magdalena and Cesar rivers) and northern Venezuela (Puerto Cabello, San Esteban, Las Quiguas, Cumbre Chiquita, and Sierra de Carabobo, State of Carabobo).<sup>1</sup>

**\**Ateleodacnis leucogenys cyanochrous* Todd.<sup>2</sup> MÉRIDA**

**ATELEODACNIS.**

*Ateleodacnis leucogenys cyanochrous* Todd, Proc. Biol. Soc. Wash., 37, p. 122, 1924—Santa Elena, Mérida, Venezuela (type in Carnegie Museum, Pittsburgh).

**Range.**—Humid Tropical zone of extreme western Venezuela, in State of Mérida (northern base of Cordillera of Mérida).

1: Venezuela (La Azulita, Mérida, 1).

**\**Ateleodacnis bicolor bicolor* (Vieillot). BICOLORED**

**ATELEODACNIS.**

*Sylvia bicolor* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 32, pl. 90 bis, 1807—"très rarement sous la zone boreale et plus communément entre les tropiques;" we suggest Cayenne as type locality (descr. of adult; type in Paris Museum examined); idem, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 167, 1817—"l'Amérique septentrionale et Cayenne."

<sup>1</sup> I am quite unable to perceive the slightest difference between eight specimens from northern Venezuela (Carabobo) and a large series of Bogotá skins. A single adult male from Aracataca (western foot of Santa Marta Mountains) is also similar.

**Material examined.**—Colombia: "Bogotá," 19; Aracataca, 1.—Venezuela, Carabobo: Cumbre Chiquita, 1; Las Quiguas, 3; Puerto Cabello, 2; San Esteban, 2.

<sup>2</sup> *Ateleodacnis leucogenys cyanochrous* Todd: Similar to *A. l. leucogenys*, but adult male decidedly darker grayish blue underneath (slate gray instead of deep gull gray) with very little whitish suffusion along the abdominal line, and white auricular patch less extensive. Wing (adult male), 54; tail, 34; bill, 10.

Judging from two adult males from the Mérida region, I think this is a recognizable form.

*Sylvia caeruleascens* Wied, Beitr. Naturg. Bras., 3, (2), p. 713, 1831—Rio Mucurí, Espírito Santo, Brazil (type in Wied Collection, now in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 218, 1889).

*Dacnis plumbea* (not *Sylvia plumbea* Latham<sup>1</sup>) Cabanis,<sup>2</sup> Mus. Hein., 1, p. 95, 1851—Venezuela; Sclater, Contrib. Orn., 1852, p. 102; idem, Proc. Zool. Soc. Lond., 22, p. 252, 1854—Guiana and Brazil; Reichenbach, Handb. Spez. Orn., livr. 5, p. 228, pl. 551b=515, fig. 4063 (fig. pess.), 1853—Trinidad and Venezuela; Sclater, Cat. Coll. Amer. Bds., p. 52, 1862—Brazil; idem, Ibis, 1863, p. 317—Brazil and Amazon Valley into Guiana and Venezuela (excl. Peru; descr.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 627—Tucacas (Falcón), Venezuela; Forbes, Ibis, 1881, p. 330—Recife, Pernambuco; Taczanowski, Orn. Pér., 1, p. 433, 1884—part (descr. of Cayenne specimens); Sclater, Cat. Bds. Brit. Mus., 11, p. 26, 1886—part, spec. a-c, e-j, Tucacas (Venezuela), Trinidad, and Bahia (Brazil); Chapman, Bull. Amer. Mus. N. H., 6, p. 26, 1894—Caroni River, Trinidad; Phelps, Auk, 14, p. 363, 1897—Cumaná, Venezuela; Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—Santa Marta region (locality not specified); Ihering, Rev. Mus. Paul., 5, p. 265, 1902—Iguapé, São Paulo; Hagmann, Zool. Jahrb. (Syst.), 26, p. 26, 1907—Mexiana; Snethlage, Journ. Orn., 55, p. 292, 1907—Marajó and Mexiana; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 250, 1909—Boca del Rio, Margarita Island; Penard, Vog. Guyana, 2, p. 473, 1910—Surinam; Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 86, 1910—coast strip of Piahy; idem, l.c., p. 187, 1925—Amaração, Piahy.

*Mniotilta bicolor* Léotaud, Ois. Trinidad, p. 180, 1866—Trinidad.

*Dacnis bicolor* Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 270—Cayenne (crit.); Berlepsch, Ibis, 1881, p. 242 (nomencl.); Hellmayr, Nov. Zool., 13, p. 11, 1906—Seelet and Caroni Swamp, Trinidad; Ménégau, Bull. Mus. Hist. Nat. Paris, 13, p. 496, 1907—French Guiana; Berlepsch, Nov. Zool., 15, p. 111, 1908—Cayenne, French Guiana; Beebe, Zoologica (N.Y.), 1, p. 102, 1909—Caño San Juan, Venezuela; Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 87, 118, 1912—Cajútuba (Pará) and Mexiana; Snethlage, Journ. Orn., 61, p. 518, 1913; idem, Bol. Mus. Goeldi, 8, p. 465, 1914—Illa das Onças (Pará), Marajó, Mexiana, Ilha Aiquiqui, and Arumanduba, Brazil; Cherrie, Sci. Bull.,

<sup>1</sup> *Sylvia plumbea* Latham (Ind. Orn., 2, p. 553, 1801—based on "Plumbeous Warbler" Latham, Gen. Syn. Bds., Suppl., p. 188) from an unknown locality, certainly does not refer to the above species, as has been pointed out by both Cassin (Proc. Acad. Nat. Sci. Phila., 1864, p. 270) and Berlepsch (Ibis, 1881, p. 242). The characters, "Size small, length three inches and three-quarters; bill short, dusky brown; plumage above deep lead-color, nearly black; beneath pale ash-colour; quills and tail dusky; legs deep brown," clearly indicate that Latham had some entirely different bird in mind. The type, formerly in the Leverian Museum, seems to have disappeared; at all events it is not among the objects acquired by the Vienna Museum at the sale of Sir Lever's collection.

<sup>2</sup> I cannot make out from the description *Dacnis plumbeus* Tschudi (Faun. Peru., Aves, p. 236, 1846). The species is said to be common on the coast and in the wood region of Peru, where *A. bicolor* does not occur at all. If really founded on a bird collected by Tschudi himself, it must refer to some other species, but which, I am unable to say.



Mus. Brookl. Inst., 2, p. 165, 1916—Caño San Juan, Orinoco Delta, Venezuela (ex Beebe); Chubb, Bds. Brit. Guiana, 2, p. 479, 1921—Bartica and Abary River; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará.

*Dendroeca bicolor* Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Rio de Janeiro and Cajútuba, Pará (spec. in Vienna Museum examined).

*Ateleodacnis bicolor* Ihering, Cat. Faun. Braz., 1, p. 334, 1907—São Paulo (Iguapé) and Bahia (range part, excl. Matto Grosso); Todd and Carriker, Ann. Carnegie Mus., 14, p. 454, 1922—Pueblo Viejo and Punto Caiman, Colombia (crit.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 269, 1929—Mangunça Island, Maranhão; Darlington, Bull. Mus. Comp. Zool., 71, p. 412, 1931—Sevillano, Magdalena, Colombia.

*Nemosia* spec. Pelzeln, Orn. Bras., 3, p. 215, 1870—Praia do Cajútuba, Pará (spec. in Vienna Museum examined;=juv.).

**Range.**—Littoral of northern Colombia (shores of the Cienaga Grande, Dept. Magdalena), Venezuela (Tucacas, Falcón; Cumaná; Boca del Rio, Margarita Island; Caño San Juan, Gulf of Paria), Trinidad (Seelet and Caroni River), British Guiana (Bartica Grove and Abary River), Dutch Guiana, French Guiana (Cayenne), and eastern Brazil, in states of Pará (Ilha das Onças, Marajó, Mexiana, Ilha Aquiqui, Arumanduba, Cajútuba), Maranhão (Mangunça Island), Piahy (Amaração), Ceará, Pernambuco (Recife), Bahia, Espirito Santo (Rio Mucury), Rio de Janeiro (Manguinhos), and São Paulo (Iguapé).<sup>1</sup>

14: Venezuela (Margarita Island, 10); British Guiana (unspecified, 2); Brazil (Mangunça Island, Maranhão, 2).

### *Ateleodacnis bicolor* minor subsp. nov.<sup>2</sup> LESSER ATELEODACNIS.

<sup>1</sup> Birds from Venezuela, Trinidad, and the Guianas agree well together. Specimens from eastern Brazil are, on average, slightly paler blue above and perhaps not quite so dark brownish buff underneath, but as a good many are not distinguishable, the recognition of a separate race (*A. b. caerulescens*) seems to be uncalled for. Five skins from the coast of Pará (Cajútuba, east of Belem), by having the under parts but faintly washed with pale buff, exhibit a certain tendency in the direction of *A. margaritae*. The sexes are nearly alike in adult plumage, the females merely differing by smaller size and somewhat duller, less bluish, dorsal surface. Birds with light olive upper, and clear yellow under parts represent the juvenile plumage.

This form seems to be restricted to the mangrove thickets (*Rhizophora mangle*) along the seashore and in brackish waters.

**Additional material examined.**—Venezuela: Cumaná, 3.—Trinidad: Seelet, 3; Caroni River, 1.—French Guiana: Cayenne, 2.—Brazil: Cajútuba, east of Pará, 7; Amaração, Piahy, 5; Bahia, 7; Rio de Janeiro, 2; Manguinhos, Rio de Janeiro, 1.

<sup>2</sup> *Ateleodacnis bicolor* minor subsp. nov.

**Type** from Rio Madeira (right bank below the junction of the Rio Mahisi) in the Vienna Museum. Adult male. November 18, 1829. J. Natterer.

**Adult.**—Similar to *A. b. bicolor*, but much smaller; under parts generally more rufescent, bright pinkish buff rather than brownish buff or grayish buff; lower tail

*Dendroeca bicolor* (not *Sylvia bicolor* Vieillot) Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Rio Madeira [below the junction of the Rio Mahisi], Brazil.

*Dacnis bicolor* Hellmayr, Nov. Zool., 17, p. 270, 1910—Rio Madeira (ex Pelzeln); Naumburg, Bull. Amer. Mus. N. H., 60, p. 364, 1930—part, Rio Madeira.

*Ateleodacnis bicolor* Ihering, Cat. Faun. Braz., 1, p. 334, 1907—part, "Matto Grosso"—Rio Madeira.

*Dacnis plumbea* (not *Sylvia plumbea* Latham) Riker and Chapman, Auk, 7, p. 266, 1890—Santarém, Brazil.

*Range*.—Northern Brazil, from the Tapajóz westward to the Rio Madeira, and eastern Ecuador (Rio Napo; mouth of the Curaray).

### ***Ateleodacnis margaritae* Holt.<sup>1</sup> MARGARITA'S ATELEODACNIS.**

*Ateleodacnis margaritae* Holt, Auk, 48, p. 570, 1931—Ceo de Arary, above Parintins, north bank of Rio Amazonas, Brazil (type in U. S. National Museum).

*Range*.—Northern Brazil, in State of Amazonas (Ceo de Arary, above Parintins, north bank; Igarapé Auará, above Borba, right bank of Rio Madeira); (?) northeastern Peru (Pebas).

### **Genus CONIROSTRUM Lafresnaye and d'Orbigny**

*Conirostrum* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 25, 1838—type, by monotypy, *Conirostrum cinereum* Lafresnaye and d'Orbigny.

coverts brighter than, instead of uniform with, the abdomen; cheeks and auriculars strongly brownish buff, not at all grayish. Wing, 54–58; tail, 36–40; tars., 16–16½; bill, 10.

This small form seems to replace the typical race in the valley of the Amazon, its range being evidently quite extensive, since an adult bird from the Rio Napo agrees in every respect with those from the Rio Madeira. Mr. Zimmer (in litt.), who confirms its distinctness, writes that the American Museum of Natural History has a good series from Santarém, Villa Bella de Imperatriz (west of the Rio Tapajóz), and both banks of the lower Rio Madeira, as well as two specimens from the mouth of the Curaray in Ecuador.

<sup>1</sup> *Ateleodacnis margaritae* Holt: Closely allied to *A. b. bicolor* and similar in size, but upper parts clearer blue gray, and lower parts, including the sides of the head, very pale gray (near light gull gray) without any buffy; bill slightly wider; feet darker reddish. Wing, 62; tail, 44; bill, 11.

Though one would be tempted to consider this bird as subspecifically related to *A. bicolor*, such cannot well be the case, for, as I am informed by Mr. Zimmer, the American Museum of Natural History has specimens of both *A. b. minor* and *A. margaritae*, from Igarapé Auará, just above Borba, on the right bank of the Rio Madeira. A single adult female, collected by J. Hauxwell at Nauta, Peru, on September 12, 1880, differs from a lower-Amazonian skin by still paler (light neutral gray) upper, and nearly pure white under parts; but whether this divergency is of any significance other than seasonal cannot be decided owing to its very worn condition. Both specimens have slightly wider bills and darker feet than *A. bicolor*.

**\**Conirostrum sitticolor sitticolor* Lafresnaye. PURPLE  
CONE-BILL.**

*Conirostrum sitticolor* Lafresnaye, Rev. Zool., 3, p. 102, 1840—Santa Fé de Bogotá, Colombia (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 395, 1930); idem, Mag. Zool., (2), 5, text to pl. 35, p. 2, 1843—Santa Fé de Bogotá (part, male); Gray and Mitchell, Gen. Bds., 1, p. 102, pl. 34, 1846; Selater, Proc. Zool. Soc. Lond., 23, pp. 75, 138, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 49, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272—Bogotá; Taczanowski, Proc. Zool. Soc. Lond., 1880, p. 193—Cutervo, Peru; Salvin, Cat. Strickl. Coll., p. 175, 1882—Bogotá; Taczanowski, Orn. Pér., 1, p. 423, 1884—Cutervo and Paucal, Peru; idem and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 75—San Rafael, Ecuador; Selater, Cat. Bds. Brit. Mus., 11, p. 13, 1886—part, spec. b-h, Bogotá and Ecuador (San Lucas); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Frutillas, Ecuador; Goodfellow, Ibis, 1901, p. 318—Papallacta and Pichincha, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 86, 1911—Alaspungo and Oyacachi, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 583, 1917—Andes west of Popayan, Laguneta, Santa Isabel, Almaguer, Valle de las Pappas, El Piñon, and Chipaque, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 81, 1922—near Chinquil, below Nono, and Silanti (Corazón), Ecuador.

*Conirostrum sitticolor sitticolor* Chapman, Bull. Amer. Mus. N. H., 55, p. 641, 1926—near Quito, Taraguacocha, Salvias, upper Rio Upano, upper Sumaco, Oyacachi, and Papallacta, Ecuador, and El Tambo [near Huanca-bamba], Dept. Piura, Peru.

*Range.*—Humid Temperate zone of Colombia (except Santa Marta region), Ecuador, and northwestern Peru (El Tambo, Dept. Piura; Cutervo, Prov. Jaen).<sup>1</sup>

3: Colombia (Bogotá, 3).

**\**Conirostrum sitticolor intermedium* Berlepsch.<sup>2</sup> VENEZUELAN  
PURPLE CONE-BILL.**

*Conirostrum sitticolor intermedium* Berlepsch, Ornith. Monatsber., 1, p. 11, 1893—Mérida, Venezuela (type in Berlepsch Collection, now in Senckenberg Museum, Frankfurt).

*Conirostrum sitticolor* (not of Lafresnaye) Selater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—Páramo de Culata, Venezuela.

<sup>1</sup> Ten specimens from Ecuador agree with a series of Bogotá skins. Birds from northwestern Peru, which we have not seen, are stated by Chapman to be paler underneath.

<sup>2</sup> *Conirostrum sitticolor intermedium* Berlepsch: Similar to *C. s. sitticolor* in deep black throat, but smaller and with broad blue superciliaries. Wing, 65–68; tail, 52–57.

*Material examined.*—Venezuela: Andes of Mérida, 9.

*Range*.—Humid Temperate zone of western Venezuela (Cordillera of Mérida).

1: Venezuela (Andes of Mérida, 1).

**\**Conirostrum sitticolor cyaneum* Taczanowski.<sup>1</sup> PERUVIAN PURPLE CONE-BILL.**

*Conirostrum cyaneum* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 512—Sillapata, Dept. Junín, Peru (type lost, formerly in Warsaw Museum); Sclater and Salvin, l.c., 1879, p. 596—Tilotilo, Bolivia; Taczanowski, Orn. Pér., 1, p. 423, 1884—Sillapata; Sclater, Cat. Bds. Brit. Mus., 11, p. 14, 1886—central Peru and Bolivia; Allen, Bull. Amer. Mus. N. H., 2, p. 80, 1889—Yungas, Bolivia; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 335—Maraynioc, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Occobamba Valley, Urubamba, Dept. Cuzco, Peru.

*Conirostrum sitticolor cyaneum* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 12, 1921—Limbani, Carabaya, Peru (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 421, 1930—above Pano, Huánuco, Peru (crit.).

*Range*.—Humid Temperate zone of Peru (except the north-western section) and western Bolivia.

5: Peru (Balsas, 1; Molinopampa, 1; above Pano, Huánuco, 3).

**\**Conirostrum rufum* Lafresnaye. RUFOUS-BROWED CONE-BILL.**

*Conirostrum rufum* Lafresnaye, Mag. Zool., (2), 5, cl. 2, text to pl. 35, p. 3, 1843—Santa Fé de Bogotá, Colombia (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 395, 1930); Sclater, Proc. Zool. Soc. Lond., 23, pp. 75, 138, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 50, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272—Bogotá;

<sup>1</sup>*Conirostrum sitticolor cyaneum* Taczanowski: Similar to *C. s. intermedium* in having broad blue superciliaries, but sides of head, throat, and foreneck slaty bluish (green-blue slate to dark green-blue slate) instead of black; posterior under parts paler ochraceous. The blue superciliary streak, besides, is more extended anteriorly, reaching frequently to above the loreal region. Wing of males, 64–67½ (Bolivia), 70 (Maraynioc); tail, 53–56.

Birds from western Bolivia and southeastern Peru (Limbani) are well characterized by slaty gular area and slightly darker (slaty black) sides of the head. The type from Sillapata (an unsexed adult in full molt), which we have examined many years ago, and a female from Maraynioc are similar, but a male from the latter locality already shows some blackish suffusion on the upper throat. Two adults from above Pano, Huánuco, have the whole upper throat dull blackish, thus diverging in the direction of *C. s. sitticolor*. The gap is closed by the male from Molinopampa, which has throat, foreneck, and sides of head very nearly as deep black as *sitticolor*, and approaches the latter form, furthermore, by having the blue superciliaries more restricted. In other words, *C. s. cyaneum*, in northern Peru, gradually passes into *C. s. sitticolor*.

*Material examined*.—Bolivia, Dept. La Paz: Unduavi, 2; Cillutincara, 1; Cocapata, 4.—Peru: Limbani, Carabaya, Dept. Puno, 1; Sillapata, 1 (the type); Maraynioc, Dept. Junín, 2; above Pano, Huánuco, 3; Molinopampa, 1; near Balsas, 1.

Wyatt, Ibis, 1871, pp. 128, 324—above Vetas, north of Bucaramanga, Santander; Salvin, Cat. Strickl. Coll., p. 176, 1882—Bogotá; Sclater, Cat. Bds. Brit. Mus., 11, p. 14, 1886—Sierra Nevada de Santa Marta and Bogotá; Stone, Proc. Acad. Nat. Sci. Phila., 1899, p. 308—Bogotá; Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—Páramo de Chiriqua and Páramo de Macotama, Santa Marta Mountains; Allen, Bull. Amer. Mus. N. H., 13, p. 174, 1900—Santa Marta Mountains (ex Bangs); Chapman, l.c., 36, p. 583, 1917—eastern Andes of Colombia (Subia, Bogotá, Chipaque, Choachi, Palo Hueco, and La Porquera); Todd and Carriker, Ann. Carnegie Mus., 14, p. 456, 1922—Páramo de Mamarongo and Páramo de Chiriqua, Santa Marta region.

*Conirostrum bicolor* Lesson,<sup>1</sup> Echo du Monde Sav., 11, (2nd sér.), No. 7, p. 158, July 25, 1844—Colombia (type in coll. of Dr. Abeillé, Bordeaux); idem, Oeuvr. Compl. Buffon, éd. Lévêque, 20, [=Descr. Mamm. Ois.], p. 275, 1847—Colombia.

*Dacnis rufocinerea* Bonaparte, Atti Sesta Riun. Sci. Ital. Milano, p. 404, 1845—Santa Fé de Bogotá (type in coll. of O. Antinori, Perugia).

**Range.**—Temperate zone of the Santa Marta Mountains and eastern Andes of Colombia.<sup>2</sup>

6: Colombia (Chipaque, 1; Páramo Guerrero, Santander, 2; Cundinamarca, 1; "Bogotá," 2).

**\**Conirostrum ferrugineiventre* Sclater.<sup>3</sup> WHITE-BROWED  
CONE-BILL.**

*Conirostrum ferrugineiventre* Sclater, Proc. Zool. Soc. Lond., 23, p. 74, pl. 85, May, 1855—Bolivia (type in Derby Collection, now in Liverpool Museum); Taczanowski, l.c., 1874, p. 511—Peru [=Maraynioc]; Sclater and Salvin, l.c., 1874, p. 678—Ccachupata, Peru; idem, l.c., 1879, p. 596—Bolivia; Taczanowski, Orn. Pér., 1, p. 424, 1884—Peru (Maraynioc, Ccachupata); Sclater, Cat. Bds. Brit. Mus., 11, p. 15, 1886—Bolivia and southern Peru (Ccachupata); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 335—Maraynioc, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 116,

<sup>1</sup> Though quoted by Sclater in the synonymy of *C. s. sillicolor*, *C. bicolor* is referable to *C. rufum*, as the description plainly shows.

<sup>2</sup> A single adult from the Sierra Nevada de Santa Marta seems to agree with "Bogotá" skins.

<sup>3</sup> *Conirostrum ferrugineiventre* Sclater is nearly related to *C. rufum* and differs chiefly by lacking the rufous forehead, distinctly black crown, white instead of rufous superciliaries, dark gray instead of dull rufous sides of head and malar region, lighter under parts, etc. Wing, (male) 67–74, (female) 64–68; tail, 54–58, (female) 50–55; bill, 10½–12.

The few Peruvian specimens examined seem to be similar to a Bolivian series. This strongly marked bird is probably conspecific with *C. rufum*, though their habitats are widely separated, a circumstance that may prevent their intergradation.

**Material examined.**—Peru: Huánuco Mountains, Huánuco, 1; Maraynioc, Junín, 2.—Bolivia: Cocapata, 6; Cillutincara, 2; Iquico, Illimani, 3; Unduavi, 2; Malaga, 1.

1921—above Torontoy, Urubamba, Peru; Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 422, 1930—Huánuco Mountains, Peru.

**Range.**—Temperate zone of southern Peru, in depts. of Huánuco (Huánuco Mountains), Junín (Maraynioc), and Cuzco (Ccachupata and above Torontoy, Urubamba), and Bolivia.

1: Peru (Huánuco Mountains, Huánuco, 1).

**\**Conirostrum cinereum fraseri* Sclater.<sup>1</sup> FRASER'S CONE-BILL.**

*Conirostrum fraseri* Sclater, Proc. Zool. Soc. Lond., 26, p. 452, Nov., 1858—Cuenca, Ecuador (type in coll. of P. L. Sclater, now in British Museum); idem, l.c., 28, p. 65, 1860—Chillanes, above Pallatanga, Ecuador; idem, Cat. Coll. Amer. Bds., p. 50, 1862—Cuenca; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 288—Cechce; idem, l.c., 1885, p. 76—San Rafael; Sclater, Cat. Bds. Brit. Mus., 11, p. 15, pl. 2, fig. 1, 1886—Ecuador (Sical, "Jima," vicinity of Quito, Cuenca); Hartert, Nov. Zool., 5, p. 481, 1898—Cayambe and Ibarra, northern Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Huaca, El Troje, Chinquil (Lloa, Tumbaco (Quito), Frutillas, and "Nanegal"; Goodfellow, Ibis, 1901, p. 318—western and eastern Andes and in the gardens of Quito; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 86, 1911—Lloa, Nono, and Tumbaco; Chapman, Bull. Amer. Mus. N. H., 36, p. 583, 1917—Valle de las Pappas, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 82, 1922—Tumbaco, Chinquil, Pichincha, Cumbaya, and near Nono; Chapman, Bull. Amer. Mus. N. H., 55, p. 641, 1926—Riobamba, Hacienda Garzón, Pomasqui, Yanacocha, Lloa, Tumbaco, Pichincha, Cumbaya, Mocha, Chimborazo, Bestion, El Paso, Taraguacocha, Salvias, and Loja, Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 74, 1928—Tumbaco, Cerro Mojanda, and San Pedro Tingo, Ecuador.

*Conirostrum cinereum* (not of Lafresnaye and d'Orbigny) Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272—part, Ecuador (crit.).

**Range.**—Temperate zone of Ecuador and southern Colombia (Valle de las Pappas).

1: Ecuador (Ibarra, Prov. Imbabura, 1).

**\**Conirostrum cinereum littorale* Berlepsch and Stolzmann.<sup>2</sup> WESTERN CINEREOUS CONE-BILL.**

<sup>1</sup> *Conirostrum cinereum fraseri* Sclater: Near to *C. c. littorale*, but crown darker; back tinged with olivaceous or brownish; superciliaries wider and deeper buff; lower parts much darker, dull brownish clay-color. Wing, (male) 58–63, (female) 56–59.

**Material examined.**—Ecuador: Ibarra, Prov. Imbabura, 4; Lloa, Pichincha, 2; Quito, 2; Cañar, Cañar, 1; Sinche, Guaranda, Prov. Guayas, 2; Guailabamba, Riobamba, 1; unspecified, 5.

<sup>2</sup> *Conirostrum cinereum littorale* Berlepsch and Stolzmann: Differs from *C. c. cinereum* by paler, olive gray rather than light slate gray upper parts with the pileum less dusky; narrower and shorter buffy superciliaries; more buffy, anteriorly

*Conirostrum cinereum littorale* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 336 (footnote)—“circum Lima et Arequipa, in Peruvia littorali” (type, from Lima, in Branicki Museum, now in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 178, 1927); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 421, 1930—Matucana, La Quinua, Huánuco, and Cullcui, Marañón River, Peru (crit.); Hellmayr, l.c., 19, p. 50, 1932—Chile (Pica, Tarapacá; Chacalluta, Tacna).

*Conirostrum cinereum* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 25, 1838—part “female” and hab. Tacna, “rep. Peruviana”; Lafresnaye, Mag. Zool., (2), 5, text to pl. 35, p. 2, 1843—part, Tacna; d'Orbigny, Voy. Amér. Mérid., Ois., p. 374, 1847—part, Tacna; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272—part, spec. ex “Tacna, Peru,” coll. of d'Orbigny (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 984—Arequipa, Peru; idem, l.c., 1868, p. 569—Arequipa; Cabanis, Journ. Orn., 21, p. 64, 1873—Lima (crit.); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Lima; idem, l.c., 1879, p. 225—Pacasmayo, Peru; idem, Orn. Pér., 1, p. 425, 1884—Lima, Pacasmayo, Cutervo (Marañón), and Tacna; Sclater, Cat. Bds. Brit. Mus., 11, p. 15, 1886—part, spec. a-c, f, Arequipa and Lima, coast of Peru; idem, Proc. Zool. Soc. Lond., 1891, p. 133—Pica, Tarapacá, Chile; Berlepsch and Stolzmann, l.c., 1892, p. 374—Lima; Salvin, Nov. Zool., 2, p. 4, 1895—Cajabamba, Huamachuco, and Chusgon (Huamachuco), Peru; Lane, Ibis, 1897, p. 15—Pica, Tarapacá, Chile (habits); Berlepsch and Stolzmann, Orn., 13, p. 67, 1906—Coracora, Dept. Ayacucho, Peru.

*Range*.—Temperate zone of extreme northern Chile (Tarapacá and Tacna provinces) and Peru, from sea-level to the crest of the Cordillera de la Costa, extending into the upper Marañón Valley.

18: Chile (Pica, Prov. Tarapacá, 9; Chacalluta, Prov. Tacna, 1); Peru (Matucana, Dept. Lima, 1; La Quinua, 1; Macate, Dept. Ancachs, 2; Chimbote, Dept. Ancachs, 1; Cullcui, Marañón River, 3).

***Conirostrum cinereum cinereum* Lafresnaye and d'Orbigny.**  
**CINEREOUS CONE-BILL.**

*Conirostrum cinereum* Lafresnaye and d'Orbigny, Syn. Av., 2, in Mag. Zool., 8, cl. 2, p. 25, 1838—part, descr. of male and hab. Yungas, Bolivia (type in Paris Museum examined); Lafresnaye, Mag. Zool., (2), 5, text to pl. 35, p. 2, 1843—part, Yungas, Bolivia; d'Orbigny, Voy. Amér. Mérid., Ois., p. 374, pl. 59, fig. 1, 1847—part, Inquisivi, Prov. Sicasica; Sclater, Proc. Zool. Soc. Lond., 1873, p. 780—Paucartambo, Dept. Cuzco, Peru;

less grayish, lower surface. Wing, (male) 56–60, (female) 55; tail, 45–48, (female) 43–45; bill, 9–10.

Birds from northern Chile are identical with those from the Peruvian coast district. Specimens in a series from the upper Marañón region are larger, suggesting an approach to the still larger *C. c. fraseri*, of Ecuador.

*Material examined*.—Chile: Pica, Tarapacá, 9; Tacna, 2; Chacalluta, Prov. Tacna, 1.—Peru: Arequipa, 3; Lima, 4; Matucana, 1; La Quinua, 1; Macate, Ancachs, 2; Chimbote, Ancachs, 1.—Upper Marañón region: Cullcui, 3; Cajabamba, 7; Cajamarca, 1; Santiago, 1; Huamachuco, 4; Leimabamba, 1.

Slater and Salvin, l.c., 1879, p. 596—Bolivia; Slater, Cat. Bds. Brit. Mus., 11, p. 15, 1886—part, spec. e, g, Maraynioc and Bolivia; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 335—Tarma and Pariayacu (Maraynioc), Peru.

*Conirostrum cinereum cinereum* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 13, 1920—Ollachea, near Macusani, Dept. Puno, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Occobamba Valley, Ollantaytambo, Huaracundo Canyon, Calca, and Cuzco, Urubamba, Peru.

*Range*.—Temperate zone of southeastern Peru, west to Junín, and western Bolivia.<sup>1</sup>

***Conirostrum albifrons cyanonotum* Todd.<sup>2</sup> BLUE-BACKED  
CONE-BILL.**

*Conirostrum cyanonotum* Todd, Proc. Biol. Soc. Wash., 45, p. 218, 1932—Colonia Tovar, Aragua, Venezuela (type in Carnegie Museum).

*Range*.—Subtropical zone of the coast range of Venezuela (Colonia Tovar, State of Aragua).

**\**Conirostrum albifrons albifrons* Lafresnaye. WHITE-CAPPED  
CONE-BILL.**

*Conirostrum albifrons* Lafresnaye, Rev. Zool., 5, p. 301, 1842—Colombia=Bogotá (descr. adult male; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 395, 1930); idem, Mag. Zool., (2), 5, pl. 35, 1843—Bogotá; Slater, Proc. Zool. Soc. Lond., 23, pp. 75, 138, 1855—Bogotá (crit.); idem, Cat. Coll. Amer. Bds., p. 50, 1862—Bogotá; Cassin, Proc. Acad. Nat. Sci. Phila., 1864, p. 272 (crit.); Slater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 496—Santa Elena, Antioquia; Salvin, Cat. Strickl. Coll., p. 176, 1882—Bogotá; Slater, Cat. Bds. Brit. Mus., 11, p. 16, 1886—

<sup>1</sup> Specimens from the Urubamba region and Sierra of Carabaya (Ollachea) are inseparable from a Bolivian series. A single female from Maraynioc, by reason of its size (wing, 61; tail, 50) and blackish crown, seems likewise referable to the present form. Additional material from Junín, however, should be carefully compared to render identification certain.

*Material examined*.—Bolivia, Dept. La Paz: Iquico, Illimani, 4; Chicaní, 1; above Chaco, 1; unspecified, 1 (the type).—Peru: Ollachea, Sierra of Carabaya, 4; Cuzco (Anta, 3; Urcos, 1; Urubamba, 1; Marcapata, 1); Paucartambo, 1; Maraynioc, Pariayacu, Dept. Junín, 1.

<sup>2</sup> *Conirostrum albifrons cyanonotum* Todd: "Pileum Hay's blue, with a few silvery white streaks on the forehead; upper parts in general black, overlaid with azurite blue, brightening into smalt blue on the rump and upper tail coverts; wings black with narrow outer edgings of azurite blue, and lesser wing coverts almost "solid" azurite blue; sides of head and entire under parts blackish violet gray with a deep bluish cast in some lights, especially posteriorly; female differing from that of *C. a. albifrons* only by its duller green upper parts. Wing, 74–77, (female) 69; tail, 56–58, (female) 53; bill, 11½–12." (Todd, l.c.).

This recently discovered form, doubtless a geographical race of *C. albifrons*, appears to differ in the male sex from the White-capped Cone-bill of Colombia by having the pileum blue with a few silvery white streaks instead of uniform white, and by having a brighter blue rump, and more bluish under parts.



part, spec. a-j, Bogotá, Santa Elena, and "Medellin," Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 583, 1917—part, central Andes (Almaguer, above Salento, Laguneta, Santa Isabel, Santa Elena) and eastern Andes (El Roble, Palo Hueco, Subia), Colombia.

*Conirostrum caeruleifrons* Lafresnaye, Rev. Zool., 5, p. 302, 1842—Colombia (descr. female; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); idem, Mag. Zool., (2), 5, text to pl. 35, p. 3, 1843—Colombia; Sclater, Cat. Coll. Amer. Bds., p. 50, 1862—"New Granada."

*Range*.—Upper Subtropical and Temperate zones of central and eastern Andes of Colombia and adjacent parts of Venezuela (Tachira).<sup>1</sup>

5: Colombia (Cachiri, Santander, 1; La Pica, Santander, 1; Santa Isabel, 1; "Bogotá," 1); Venezuela (Páramo de Tamá, 1).

### *Conirostrum albifrons atrocyaneum* Lafresnaye.<sup>2</sup> BLUE-CAPPED CONE-BILL.

*Conirostrum atrocyaneum* Lafresnaye, Rev. Zool., 11, p. 9, 1848—"de Colombie, près de Rio Napo" (descr. male; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 396, 1930); Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 225—Tambillo and Montaña de Palto, Peru; idem, l.c., 1882, p. 8—Tamiapampa, Peru; idem, Orn. Pér., 1, p. 426, 1884—part, Tambillo, Montaña de Palto, and Tamiapampa; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 288—Cayandeled, Chaguarpata, and Pedregal, western Ecuador; Sclater, Cat. Bds. Brit. Mus., 11, p. 16, 1886—part, spec. c, Pallatanga; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Niebli, western Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 583, 1917—Cerro Munchique, western Andes, Colombia; idem, l.c., 55, p. 642, 1926—junction of Chanchan and Chiguancay rivers, above Baeza, and upper Sumaco, Ecuador (crit.).

*Conirostrum albifrons* (not of Lafresnaye) Sclater, Proc. Zool. Soc. Lond., 27, p. 138, 1859—Pallatanga, Ecuador; idem, Cat. Bds. Brit. Mus., 11,

<sup>1</sup>Additional material examined.—Colombia: Salento, western Andes, 2; "Bogotá," 14.

<sup>2</sup>*Conirostrum albifrons atrocyaneum* Lafresnaye: Similar in the male sex to *C. a. albifrons*, but forehead and crown purplish blue instead of milky white; female not distinguishable. Wing, (male) 70–74, (female) 63; tail, 54–60, (female) 50; bill, 11–12.

We have no topotypical material, but males from western Ecuador and northern Peru, which agree well together, correspond to Lafresnaye's description except in having the outer margins to the remiges purplish blue instead of olivaceous. The close relationship between *albifrons* and *atrocyaneum* is plainly shown by the occasional occurrence of scattered blue feathers in the generally wholly white crown of males from Colombia (*albifrons*), as well as by the similarity in the female sex. If white-crowned males really occur in Ecuador, as is suggested by Sclater's record of *albifrons* from "Jima," such individuals might have to be regarded as reversional mutants rather than albinistic examples of *atrocyaneum*.

*Material examined*.—Ecuador: Cayandeled, 1; Niebli, 1; Chaguarpata, 1.—Peru: Tamiapampa, 1; Tambillo, 1.

p. 16, 1886—part, spec. k-m, "Jima" and Yauayaca, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 583, 1917—part, Cerro Munchique, western Andes of Colombia.

*Range*.—Subtropical and Temperate zones of northern Peru, Ecuador, and the western Andes of Colombia (Cerro Munchique).

**Conirostrum albifrons sordidum** Berlepsch.<sup>1</sup> WEST BOLIVIAN  
CONE-BILL.

*Conirostrum atrocyaneum sordidum* Berlepsch, Journ. Orn., 49, p. 83 (in text), Jan., 1901—San Antonio, western Yungas, Bolivia (type in Berlepsch Collection, now in Frankfort Museum, examined); Berlepsch and Stolzmann, Orn., 13, p. 76, 1906—Idma, Urubamba, Dept. Cuzco, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 116, 1921—Idma and San Miguel Bridge, Urubamba, Peru (crit.).

*Conirostrum atrocyaneum* (not of Lafresnaye) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 511—Chilpes, Dept. Junín, Peru; Sclater and Salvin, l.c., 1879, p. 597—Tilotilo, Bolivia; Taczanowski, Orn. Pér., 1, p. 427, part, Chilpes; Sclater, Cat. Bds. Brit. Mus., 11, p. 16, 1886—part, spec. a, b, Bolivia; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 335—Garita del Sol and Culumachay, Dept. Junín, Peru (crit.).

*Range*.—Subtropical and Temperate zones of western Bolivia (western Yungas, Dept. La Paz) and southern Peru, north to Dept. Junín.

**Conirostrum albifrons lugens** Berlepsch.<sup>3</sup> EAST BOLIVIAN  
CONE-BILL.

<sup>1</sup> *Conirostrum albifrons sordidum* Berlepsch: Similar in the male sex to *C. a. atrocyaneum*; but dorsal surface mainly dull black with merely a faint purplish blue sheen on the mantle, and the purple blue uropygial area much duller as well as less extensive; lower parts dull black, only the tips of the tail coverts slightly tinged with purplish; blue humeral patch restricted to the lesser upper wing coverts, consequently much smaller; edges to larger wing coverts and remiges duller bluish. Wing, (male) 71–72, (female) 63–66; tail, 56–59, (female) 50–54; bill, 11–12.

The above diagnosis is based on the type specimen from San Antonio, Dept. La Paz, Bolivia. Males from Idma, Urubamba, and Garita del Sol, Junín, Peru, diverge towards *C. a. atrocyaneum*, as represented by specimens from northern Peru (Tamiapampa, Tambillo) and western Ecuador, by having the under parts slightly glossed with bluish, and the purplish sheen above, particularly on the rump and humeral area, more strongly suggested. The margins to the remiges are dusky olive green rather than dull bluish. Females cannot be distinguished with certainty from those of *atrocyaneum*.

*Material examined*.—Bolivia, Dept. La Paz: San Antonio, 1; Chaco, 1.—Peru: Chuhuasi, Sierra of Carabaya, Dept. Puno, 1; Idma, Urubamba, Dept. Cuzco, 3; Garita del Sol, Vitoc, Dept. Junín, 1; Culumachay, Maraynioc, Dept. Junín, 1.

<sup>3</sup> The record "Pacasmayo" is doubtless erroneous.

<sup>3</sup> *Conirostrum albifrons lugens* Berlepsch: Male similar to *C. a. sordidum*, but back uniform sooty blackish, only the rump faintly tinged with olive; median and greater wing coverts and scapulars without trace of purple blue edges; margins to wing and tail feathers dull olivaceous, much reduced in extent; lower surface duller blackish, the flanks and tail coverts washed with dingy olivaceous instead

*Conirostrum lugens* Berlepsch, Journ. Orn., 49, p. 82, Jan., 1901—Cocapata, eastern Yungas, Bolivia (type in Berlepsch Collection, now in Frankfort Museum, examined).

**Range.**—Subtropical and Temperate zones of eastern Bolivia (Yungas of Cochabamba).

### Genus **OREOMANES** Sclater

*Oreomanes* Sclater, Proc. Zool. Soc. Lond., 28, p. 75, 1860—type, by orig. desig., *Oreomanes fraseri* Sclater.

#### **Oreomanes fraseri** Sclater. FRASER'S GIANT CONE-BILL.

*Oreomanes fraseri* Sclater, Proc. Zool. Soc. Lond., 28, p. 75, pl. 159, 1860—Panza, Chimborazo, Ecuador (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 49, 1862—Chimborazo; Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 76—Chimborazo; Sclater, Cat. Bds. Brit. Mus., 11, p. 12, 1886—Ecuador (Panza, Sical) and Colombia (Pasto); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 12, 1899—Chaupi, Paramo de Illiniza, Ecuador; Berlepsch, Orn. 11, p. 197, 1901—Anta, near Cuzco, Peru; Hellmayr, Verh. Orn. Ges. Bay., 11, p. 159, 1912—Ollachea, twenty miles north of Macusani, Sierra de Carabaya, Dept. Puno, Peru; idem, Arch. Naturg., 85, A, Heft 10, p. 11, 1920—Ollachea, Puno, and Anta, Cuzco, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 115, 1921—Cedrobamba, Peru; idem, Bull. Amer. Mus. N. H., 55, p. 641, 1926—Mocha Canyon and Cerro Huamani, Ecuador.

*Oreomanes binghami* Chapman, Bull. Amer. Mus. N. H., 41, p. 331, 1919—Cedrobamba Ruins, Matchu Picchu, Urubamba, Dept. Cuzco, Peru (type, in U. S. National Museum, examined).

**Range.**—Humid Temperate zone of southern Colombia (Pasto), Ecuador (Chimborazo, Illiniza, Cerro Huamani), and southeastern Peru (Cedrobamba and Anta, Dept. Cuzco; Ollachea, Dept. Puno).<sup>1</sup>

of with dull purplish blue; female indistinguishable. Wing, (male) 70, (female) 63–64; tail, 55–58, (female) 51–52; bill, 11–12.

**Material examined.**—Bolivia, eastern Yungas: Cocapata, 3; Quebrada Onda, 1.

<sup>1</sup> The type of *O. binghami* differs from all other specimens examined by white instead of chestnut superciliaries. The white chin and the mainly white malar region claimed for this supposed southern form are also found in an (apparently immature) male from Ollachea, which, besides, has a narrower chestnut superciliary streak interspersed with some white feathers. Three other Peruvian specimens, two from Ollachea and one from Anta, Cuzco, however, agree with those from Ecuador and Colombia in coloration, viz., in having broad chestnut superciliaries, chestnut chin, and the malar region spotted with black and chestnut, and it seems very questionable if the slightly longer bill of the inhabitants of Peru affords sufficient grounds for their separation.

**Material examined.**—Colombia: Pasto, 1.—Ecuador: Chaupi, 1; Chimborazo, 2.—Peru: Anta, Cuzco, 1; Cedrobamba, Cuzco, 1; Ollachea, Puno, 3.

Genus EUNEORNIS Fitzinger<sup>1</sup>

- Euneornis* Fitzinger, Sitzungsber. Math.-Naturw. Kl. Akad. Wiss. Wien, 21, (2), p. 316, 1856—type, by orig. desig., *Motacilla campestris* Linnaeus.  
*Glossiptila* Sclater, Proc. Zool. Soc. Lond., 24, "1856," p. 269, pub. Jan. 26, 1857—type, by monotypy, *Tanagra ruficollis* Gmelin = *Motacilla campestris* Linnaeus.

\**Euneornis campestris* (Linnaeus). ORANGEQUIT.

- Motacilla campestris* Linnaeus, Syst. Nat., 10th ed., 1, p. 184, 1758—based on "American Hedge Sparrow" Edwards, Nat. Hist. Bds., 3, p. 122, pl. 122, fig. [2]; Jamaica (=female).  
*Tanagra ruficollis* Gmelin, Syst. Nat., 1, (2), p. 894, 1789—based on "Rufous-throated Tanager" Latham, Gen. Syn. Bds., 2, (1), p. 241, 1783; Jamaica (type in British Museum;=male).  
*Tachyphonus rufogularis* Lafresnaye, Rev. Zool., 9, p. 320, 1846—Jamaica (descr. male; type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 393, 1930).  
*Tanagrella ruficollis* Gosse, Bds. Jamaica, p. 236, 1847—Jamaica (habits, nest, and eggs); idem, Illust. Bds. Jam., pl. 58, 1849.  
*Glossiptila ruficollis* Sclater, Proc. Zool. Soc. Lond., 24, "1856," p. 269, Jan., 1857—Jamaica and "S. Domingo," errore (monog.); idem, l.c., 1861, p. 73—Jamaica; idem, Cat. Coll. Amer. Bds., p. 54, 1862—Jamaica; March, Proc. Acad. Nat. Sci. Phila., 1863, p. 296—Jamaica (nest and eggs); Sclater, Cat. Bds. Brit. Mus., 11, p. 48, 1886—Moneague and Chesterfield, Jamaica; Cory, Auk, 3, p. 54, 1886—Jamaica (monog.); idem, Birds W. Ind., p. 68, 1889—Jamaica (monog.); idem, Cat. W. Ind. Bds., p. 117, 1892—Jamaica; Scott, Auk, 10, p. 339, 1893—Jamaica (habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 424, 1902—Jamaica (monog.).  
*Glossiptila campestris* Lucas, Proc. U. S. Nat. Mus., 17, p. 301, 1894 (tongue).  
*Euneornis campestris* Sharpe, Hand-List Bds., 5, p. 344, 1909—Jamaica; Danforth, Auk, 45, p. 489, 1928—Kingston, Lumsden, Jacksontown, and Mandeville, Jamaica (food, song).

Range.—Island of Jamaica, Greater Antilles.

24: Jamaica.

## Family COMPSOTHTYPIIDAE. Wood Warblers

## Genus MNIOTILTA Vieillot

- Mniotilta* Vieillot, Analyse Nouv. Ornith. Elém., p. 45, 1816—type, by monotypy, "Figuier varié" Buffon = *Motacilla varia* Linnaeus.  
*Oxyglossus* Swainson, Zool. Journ., 3, p. 356, 1827—type, by orig. desig., *Certhia maculata* Wilson = *Motacilla varia* Linnaeus.

<sup>1</sup> *Neornis* (not of Hodgson, 1844) Hartlaub (Erster Nachtrag Verz. Vogels. Mus. Bremen, p. 8, 1846), based on an undescribed species, *Neornis caerules* Hartlaub (MS.), is a nomen nudum, and has no nomenclatorial standing.

**\*Mniotilta varia (Linnaeus). BLACK-AND-WHITE CREEPER.**

*Motacilla varia* Linnaeus, Syst. Nat., 12th ed., 1, p. 333, 1766—based on the "Small Black and White Creeper" Sloane (Nat. Hist. Jamaica, 2, p. 309, pl. 265, fig. 1, Jamaica) and "Le Figuier varié de S. Domingue" Brisson (Orn., 3, p. 529, pl. 27, fig. 5, Santo Domingo).

*Certhia maculata* Wilson, Amer. Orn., 3, p. 23, pl. 19, fig. 3, 1811—Pennsylvania (type in Peale's Museum, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 357, 1930).

*Mniotilta borealis* Nuttall, Man. Orn. U. S. and Canada, 2nd ed., 1, p. 705, 1840—Spot Pond, near Medford, Massachusetts (type doubtless lost).

*Mniotilta varia* var. *longirostris* Baird, Rep. Expl. Surv. R. R. Pacif., 9, p. xxxi, 1858—Florida=Cape Florida (cf. p. 236, in text; type in U. S. National Museum).

*Mniotilta varia* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 251, 641, 1885 (monog.); Allen, Bull. Amer. Mus. N. H., 13, p. 178, 1900—Bonda, Las Nubes, and Onaca, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 432, 1902 (monog., full bibliog.); Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1091—Pueblo Rico and Loma Hermosa, Colombia; idem and Seilern, Arch. Naturg., 78, A, Heft 5, p. 45, 1912—San Esteban, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 543, 1917—Caldas, Las Lomitas, San Antonio, Rio Frio, Salento, Santa Elena, El Eden, and El Consuelo (above Honda), and Quetame, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 458, 1922—Santa Marta region, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 592, 1926—Baeza, Ecuador; Grinnell, Univ. Calif. Pub. Zool., 32, p. 197, 1928—Lower California; Darlington, Bull. Mus. Comp. Zool., 71, p. 413, 1931—Rio Frio, Magdalena, Colombia.

*Range*.—North America from Mackenzie, Manitoba, Ontario, Newfoundland, Nova Scotia, and New Brunswick south to eastern Texas, Louisiana, central Alabama, and northern Georgia, west to South Dakota and casually to Wyoming, Montana, and Colorado; winters from Colima and Nuevo Leon, Mexico, to Colombia, Ecuador (Baeza), and Venezuela, and in Florida, the Bahamas, and the West Indies to Guadeloupe; casually in southern Texas, California, and Lower California; accidental in Washington and Bermuda.

178: Maine (Brewer, 1; New Vineyard, 1); Massachusetts (Cliftondale, 8; Natick, 2); Rhode Island (Johnston, 1); Connecticut (East Hartford, 22); New York (Hastings, 1; Shelter Island, 4); New Jersey (Englewood, 1); Pennsylvania (Hockelage, 1); Illinois (Addison, 1; Chicago, 4; Deerfield, 1; Fox Lake, 1; Grand Chain, 11; Henry, 2; Joliet, 2; Lake Forest, 9; Mound City, 3; Olive Branch, 1); Wisconsin (Beaver Dam, 8); Iowa (Cedar Rapids, 1); North Carolina (Raleigh, 2); Florida (Eau Gallie, 1; Gainesville, 3; Jupiter, 1; Key West, 3; Lake Worth, 2; Nassau County, 2; New River, 2; West Jupiter, 4); Mississippi (Holly Springs, 1); Texas (Corpus

Christi, 3; Ingram, 1); Mexico (Tampico, 4; Yucatan, Cozumel Island, 1); Ruatan Island, Bay of Honduras, 1; Guatemala (Mazatenango, 1; Patulul, Solola, 1); Costa Rica (Coliblanco, 1; Guayábo, 1; Port Limón, 1); West Indies (Abaco, 1; Great Bahama, 2; Bimini, 3; Berry, 2; Eleuthera, 3; Watlings, 5; Nassau, 1; Cuba, 1; Old Providence, 4; Grand Cayman, 4; Jamaica, 3; Inagua, 6; Haiti, 1; Santo Domingo, 9; Mona, 1; Porto Rico, 3; St. Croix, 1; St. Eustatius, 2; St. Kitts, 1; St. Andrews, 1); Colombia ("Bogotá," 1); Venezuela (near Mérida, 1).

### Genus PROTONOTARIA Baird

*Protonotaria* Baird, Rep. Expl. and Surv. R. R. Pac., 9, p. 239, 1858—type, by monotypy, *Motacilla protonotarius* Gmelin=*Motacilla citrea* Boddaert.

#### \**Protonotaria citrea* (Boddaert). PROTHONOTARY WARBLER.

*Motacilla citrea* Boddaert, Tabl. Pl. Enl., p. 44, 1783—based on "Figuier à ventre et tête jaune de la Louisiane" Daubenton, Pl. Enl., pl. 704, fig. 2; Louisiana.

*Motacilla protonotarius* Gmelin, Syst. Nat., 1, (2), p. 972, 1789—based on "Figuier Protonotaire" Buffon; Daubenton, Pl. Enl., pl. 704, fig. 2, etc.; Louisiana.

*Motacilla auricollis* Gmelin, Syst. Nat., 1, (2), p. 984, 1789—based on "Le Grand Figuier de Canada" Brisson, Orn., 3, p. 508, pl. 26, fig. 1, Canada (type in coll. of M. de Réaumur).

*Protonotaria citrea* Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—south of Mérida, Venezuela; idem, l.c., 1879, p. 494—Antioquia; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 249, 641, 1885 (monog.); Richmond, Proc. U. S. Nat. Mus., 16, p. 483, 1893—Rio Escondido, Nicaragua; Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 178, 1900—Bonda, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 442, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 817, 1910—Bolson and San José, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 36, p. 543, 1917—Algodonal, Colombia; Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Toro Point and Mindi, Panama; Todd and Carriker, Ann. Carnegie Mus., 14, p. 458, 1922—Bonda, Gaira, Mamatoco, Punta Caiman, and Fundación, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 592, 1926—Esmeraldas, Ecuador; Darlington, Bull. Mus. Comp. Zool., 71, p. 413, 1931—Sevillano, Cienaga, Donjaca, and Rio Frio, Magdalena, Colombia; Peters, l.c., 71, p. 333, 1931—Almirante Bay region, Panama.

*Mniotilta citrea* Léotaud, Ois. Trinidad, p. 179, 1866—Trinidad.

**Range.**—United States from northeastern Nebraska and Minnesota, southern Wisconsin and Michigan, Ohio, central Delaware, and eastern Maryland (one record from northern New Jersey) south to eastern Texas, southern Alabama, and northern Florida;

winters in Nicaragua, Costa Rica (sparingly), Panama, northern Colombia, western Ecuador (one record from Esmeraldas), Venezuela (one record from near Mérida), and Trinidad (one record); accidental in the West Indies, casual north to New Jersey, New York, New England, Michigan, Ontario, New Brunswick, and Arizona.

34: New York (unspecified, 1); Indiana (Davis Station, 1); Illinois (Lewistown, 2; Olive Branch, 2; Pulaski County, 1; Warsaw, 1); Kansas (Hamilton, 1); South Carolina (Mount Pleasant, 4); Florida (Amelia Island, 1; East Pass, 2; Gainesville, 2; Key West, 5; Mary Esther, 1; Puntarasa, 1); Mississippi (Vicksburg, 5); Texas (Corpus Christi, 1); Colombia (near San José de Cucuta, 1); Venezuela (Encontrados, Zulia, 2).

### Genus LIMNOTHLYPIS Stone

*Limnothlypis* Stone, Science, (n.s.), 40, No. 1018, p. 26, July, 1914—type, by orig. desig., *Sylvia swainsonii* Audubon.

#### \**Limnothlypis swainsonii* (Audubon). SWAINSON'S WARBLER.

*Sylvia swainsonii* Audubon, Birds Amer. (folio), 2, pl. 198, 1834; idem, Orn. Biog., 2, p. 563, 1834 (?1835)—Edisto River, near Charleston, South Carolina (type in U. S. National Museum).

*Helminthophila swainsoni* Sharpe, Cat. Bds. Brit. Mus., 10, p. 232, 1885—southern United States, wintering in Jamaica.

*Helinaia swainsonii* Salvin and Godman, Ibis, 1889, p. 236—near the town of Vera Cruz, Mexico; Cory, Auk, 8, p. 298, 1891—Bimini Islands, Bahamas; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 436, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Cay Lobos, Bahamas; Phillips, Auk, 28, p. 84, 1911—Matamoros, Tamaulipas; Peters, Auk, 30, p. 378, 1911—Santa Lucia, Quintana Roo, Mexico, and Swan Island, Caribbean Sea; Ramsden, Auk, 31, p. 253, 1914—San Carlos, near Guantánamo, Cuba.

*Helmitherus swainsoni* Cory, Bds. W. Ind., p. 41, 1889—Cuba and Jamaica.

*Limnothlypis swainsonii* Barbour, Mem. Nutt. Orn. Cl., 6, p. 112, 1923—Cuba (Cojimar and near Guantánamo).

**Range.**—Southern United States from northeastern Oklahoma, southeastern Missouri, southern Illinois and Indiana, and southeastern Virginia (Warwick County) south to Louisiana and northern Florida; migrates through Cuba (two records) and the Bahamas (Bimini Islands, Cay Lobos) and winters in Jamaica, Quintana Roo (Santa Lucia), and Swan Island, Caribbean Sea; casual in Nebraska, Texas, Tamaulipas (Matamoros), and Vera Cruz (Vera Cruz).

12: South Carolina (Charleston, 4; Hardville, 1; Mount Pleasant, 1); Georgia (Altamaha River swamp, 1); Mississippi (Vicksburg, 1); Florida (Key West, 2; Sombrero Key, 1); Bahama Islands (Bimini, 1).

### Genus HELMITHEROS Rafinesque

*Helmitheros* Rafinesque, Journ. Phys. Chimie et Hist. Nat., 88, p. 418, 1819—type, by orig. desig., *Helmitheros migratorius* Rafinesque=*Motacilla vermivora* Gmelin.

*Helinaia* Audubon, Syn. Bds. Amer., p. 67, 1839—type, by subs. desig. (Gray, List. Gen. Bds., 2nd ed., p. 33, 1841), *Motacilla vermivora* Gmelin.

*Helonaea* Agassiz, Nomencl. Zool. Ind. Univ., pp. 175, 176, 1846—emendation of *Helinaia* Audubon.

*Helmitherus* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 251, 1858—emendation of *Helmitheros* Rafinesque.

*Helmintherus* Salvin, Proc. Zool. Soc. Lond., 1867, p. 135 (emendation).

*Helmithera* Sundevall, Meth. Nat. Av. Disp. Tent., p. 28, 1872 (emendation).

*Helminthotherus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 112, 1880 (emendation).

### \**Helmitheros vermivorus* (Gmelin). WORM-EATING WARBLER.

*Motacilla vermivora*<sup>1</sup> Gmelin, Syst. Nat., 1, (2), p. 951, 1789—based on "The Worm-eater" Edwards, Glean. Nat. Hist., 2, p. 200, pl. 305; Pennsylvania.

*Helmitheros migratorius* Rafinesque, Journ. Phys. Chimie Hist. Nat., 88, p. 418, 1819—based on *Sylvia vermivora* Wilson, Amer. Orn., 3, p. 74, pl. 24, fig. 4; Pennsylvania.

*Vermivora pennsylvanica*<sup>2</sup> Jardine ed. Wilson's Amer. Orn., 1, p. 363, 1832—new name for *Sylvia vermivora* Wilson.

*Vermivora fulvicapilla* Swainson, Nat. Hist. Classif. Bds., 2, p. 245, 1837—based on *Sylvia vermivora* Wilson, Amer. Orn., 3, pl. 24, fig. 4; Pennsylvania.

*Helminthotherus vermivorus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 112, 1880; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 230, 638, 1885 (monog.).

*Helmitheros vermivorus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 439, 1902 (monog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Bahamas (New Providence, Cay Lobos, Great Inagua); Barbour, Mem. Nutt. Orn. Cl., 6, p. 113, 1923—Cuba.

**Range.**—United States from southern Iowa, northern Illinois, western New York, Pennsylvania, and the Hudson and Connecticut River valleys south to southern Missouri, northern Alabama and Georgia, Tennessee, Virginia, and the mountains of South Carolina;

<sup>1</sup> Misprinted "*merrivora*."

<sup>2</sup> This name, often attributed to Swainson, does not occur in the Phil. Mag., (n.s.), 1, p. 434, 1827.



winters from Chiapas to Panama, Cuba, the Bahamas, and rarely in Florida; casual in Massachusetts, Vermont, Ontario, and Wisconsin.

28: New Jersey (Englewood, 5); West Virginia (Coalburg, 1); Ohio (Columbus, 1); Indiana (Wheatland, 1); South Carolina (Charleston, 2; Mount Pleasant, 3); Florida (Banana River, 1; Gainesville, 1; Key West, 3; Nassau County, 2; Puntarasa, 2); West Indies (Cayman Brac, 1; Great Bahama, 1; Inagua, 1; Jamaica, 1); Guatemala (Patulul, Solola, 1); Costa Rica (Guayábo, 1).

### Genus VERMIVORA Swainson<sup>1</sup>

*Vermivora* Swainson, Phil. Mag., (n.s.), 1, p. 434, June, 1827—type, by monotypy, *Vermivora solitaria* Wilson=*Certhia pinus* Linnaeus.

*Helminthophaga* (not of Bechstein, 1803) Cabanis, Mus. Hein., 1, p. 20, 1851—type, by orig. desig., *Motacilla chrysoptera* Linnaeus.

<sup>1</sup> The following "species" referred to the genus are now regarded as hybrids.

(1) ***Vermivora leucobronchialis* (Brewster). BREWSTER'S WARBLER.**

*Helminthophaga leucobronchialis* Brewster, American Sportsman (newspaper), 5, p. 33, Oct. 17, 1874—Newtonville, Massachusetts (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 357, 1930).

*Helminthophaga gunnii* Gibbs, Daily Democrat (newspaper, Grand Rapids, Michigan), June 1, 1879—Ottawa County, Michigan (location of type unknown); Ridgway, Bull. Nutt. Orn. Cl., 4, p. 233, 1879 (crit.).

*Helminthophila leucobronchialis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 453, 1902 (monog., full bibliog.); Bishop, Auk, 22, pp. 21–22, 1905 (crit.); Townsend, Auk, 25, p. 65, 1908 (crit.); Faxon, Mem. Mus. Comp. Zool., 40, No. 2, pp. 55–78, col. pl., 1911; idem, l.c., No. 6, pp. 311–316, 1913 (crit.); Hellmayr, Verh. Orn. Ges. Bay., 14, p. 284, 1920—El Valle, Mérida, Venezuela (male, Apr. 8, 1895).

This bird, shown by Faxon to be a hybrid between *V. chrysoptera* and *V. pinus*, has been taken frequently in the eastern United States and winters in Venezuela (El Valle, near Mérida).

1: New Jersey (Englewood, 1).

(2) ***Vermivora lawrencii* (Herrick). LAWRENCE'S WARBLER.**

*Helminthophaga lawrencii* Herrick, Proc. Acad. Nat. Sci. Phila., 1874, p. 220, pl. 15—Passaic River, New Jersey (type in coll. of H. Herrick).

*Helminthophila lawrencii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 452, 1902 (monog., full bibliog.); Bishop, Auk, 22, pp. 21–24, 1905 (crit.).

This bird, believed to be a hybrid between *Vermivora pinus* and *V. chrysoptera*, also has been found in the eastern United States (New Jersey, New York, Connecticut), but is much less common.

(3) ***Vermivora cincinnatiensis* (Langdon). CINCINNATI WARBLER.**

*Helminthophaga cincinnatiensis* Langdon, Journ. Cincinnati Soc. Nat. Hist., 3, No. 2, p. 119, 1880—Madisonville, Hamilton County, Ohio (type in coll. of F. W. Langdon); idem, Bull. Nutt. Orn. Cl., 5, p. 208, pl. 4, 1880 (reprint); Ridgway, l.c., 5, p. 237, 1880 (crit.); Bull. U. S. Nat. Mus., 50, Part 2, p. 446, 1902 (monog., full bibliog.).

The unique type taken on May 1, 1880, at Madisonville, Ohio, is an obvious hybrid between *Vermivora pinus* and *Oporornis formosa*.

*Helminthophila* Ridgway, Bull. Nutt. Orn. Cl., 7, p. 53, 1882—new name for *Helminthophaga* Cabanis, preoccupied.

*Oreothlypis* Ridgway, Auk, 1, p. 169 (in text), 1884—type, by orig. desig., *Compsothlypis gutturalis* Cabanis.

**\**Vermivora chrysoptera* (Linnaeus). GOLDEN-WINGED WARBLER.**

*Motacilla chrysoptera* Linnaeus, Syst. Nat., 12th ed., 1, p. 333, 1766—based on "The Golden-winged Fly-catcher" Edwards, Glean. Nat. Hist., 2, p. 189, pl. 299; Pennsylvania.

*Motacilla flavifrons* Gmelin, Syst. Nat., 1, (2), p. 976, 1789—based on "Yellow-fronted Warbler" Pennant, Arct. Zool., 2, p. 404; Pennsylvania.

*Sylvicola inornata* Swainson, Phil. Mag., (n.s.), 1, p. 434, 1827—near Vera Cruz, Mexico (location of type not stated).

*Helminthophaga chrysoptera* Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 494—Santa Elena, Colombia; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 114, 1880 (monog.); idem, Ibis, 1880, p. 117—Minca, Colombia.

*Helminthophila chrysoptera* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 235, 639, 1885 (monog.); Bangs, Proc. Biol. Soc. Wash., 12, p. 160, 1898—Pueblo Viejo, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 178, 1900—Bonda, Las Nubes, Minca, and Pueblo Viejo, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 448, 1902 (monog., full bibliog.).

*Vermivora chrysoptera* Chapman, Bull. Amer. Mus. N. H., 36, p. 543, 1917—Salento, El Eden, and Villavicencio, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 457, 1922—Las Nubes and Chirua, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 114, 1923—near Cardenas, Cuba.

**Range.**—North America from Minnesota, Ontario, and Massachusetts south to southern Iowa, northern Illinois, Indiana, and New Jersey, and in the mountains to northern Georgia; winters from Guatemala to Colombia and Venezuela (Mérida region), and casually in southern Mexico; casual in Kansas; accidental in Manitoba and Cuba.

12: Massachusetts (Lincoln, 1; unspecified, 1); Connecticut (Suffield, 1); New Jersey (Englewood, 1); Illinois (Beach, Lake County, 1; Deerfield, 2; Henry, 1; Joliet, 1; Lake Forest, 1); Texas (Brownsville, 1); Costa Rica (Coliblanco, 1).

**\**Vermivora pinus* (Linnaeus). BLUE-WINGED WARBLER.**

*Certhia pinus* Linnaeus, Syst. Nat., 12th ed., 1, p. 187, 1766—based chiefly on "The Pine-Creeper" Edwards, Glean. Nat. Hist., 2, p. 140, pl. 277, upper fig.; Philadelphia, Pennsylvania.

*Sylvia solitaria* Wilson, Amer. Orn., 2, p. 109, pl. 15, fig. 4, 1810—Pennsylvania (type in Peale's Museum, doubtless lost).

*Helminthophaga pinus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 115, 1880—eastern North America, south to Mexico (Vera Cruz, Jalapa, Cordoba) and Guatemala (Retalhuleu, Coban, Choctum, Telemán).

*Helminthophila pinus* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 237, 639, 1885 (monog.); Richmond, Proc. U. S. Nat. Mus., 16, p. 483, 1893—Greytown and Escondido River, Nicaragua; Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—Chirua, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 455, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Abaco.

*Vermivora pinus* Griscom, Bull. Amer. Mus. N. H., 64, p. 325, 1932—Guatemala (Secanquim and Hacienda California).

*Range*.—Eastern United States from southeastern Minnesota, southern Michigan, western New York and Massachusetts, Rhode Island, and southern Connecticut south to northeastern Kansas, Missouri, northern Alabama and Georgia, Kentucky, Maryland, and Delaware; winters from southern Mexico to Nicaragua and casually to Colombia (one record from Chirua, Santa Marta region); occasional in southern Ontario; accidental in the Bahamas (one record from Abaco).

17: Connecticut (Fairfield, 1; New Haven, 1; Shelton, 1); New Jersey (Englewood, 5; Leonia, 1; New Lisbon, 1); Illinois (Grand Chain, 2; Chicago, 1); Missouri (Cliff Cave, 1); Arkansas (Winslow, 1); Mexico (unspecified, 1); Guatemala (Gualan, Zacapa, 1).

**\**Vermivora bachmanii* (Audubon). BACHMAN'S WARBLER.**

*Sylvia bachmanii* Audubon, Birds Amer. (folio), 2, pl. 185, 1833 [1834?]; idem, Orn. Biog., 2, p. 483, 1834 [1835?—near Charleston, South Carolina (type in U. S. National Museum).

*Helminthophila bachmanii* Widmann and Ridgway, Auk, 14, pp. 305–310, 1897—Dunklin County, Missouri (habits, nest and eggs descr.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 458, 1902 (monog., full bibliog.); Brewster, Auk, 22, p. 392, 1905—near Charleston, South Carolina (breeding; descr. young); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Cay Sal, Bahamas.

*Vermivora bachmani* Holt, Auk, 37, p. 103, pl. 4, 1920—Bear Swamp, near Autaugaville, Alabama (nest and eggs descr.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 113, 1923—Cuba.

*Range*.—Southern United States, in southeastern Missouri, northeastern Arkansas, western Kentucky, northern Alabama, and in South Carolina (near Charleston), probably also in southern Indiana and eastern North Carolina; migrates through Louisiana, Mississippi, Alabama, Georgia, and Florida; winters in Cuba; casual in Virginia and the Bahamas (Cay Sal).

30: Florida (Key West, 19; Town Point, Santa Rosa County, 4); Louisiana (Mandeville, near New Orleans, 7).

**\**Vermivora peregrina* (Wilson). TENNESSEE WARBLER.**

*Sylvia peregrina* Wilson, Amer. Orn., 3, p. 83, pl. 25, fig. 2, 1811—banks of the Cumberland River, Tennessee (type in Peale's Museum, doubtless lost).

*Sylvia tenensaei* Vieillot, Tabl. Enc. Méth., Orn., livr. 89, p. 452, 1820—based on Wilson, Amer. Orn., 3, pl. 25, fig. 2.

*Sylvia missouriensis* Wied, Journ. Orn., 6, p. 117, 1858—lower Missouri River (type lost).

*Helminthophaga peregrina* Wyatt, Ibis, 1871, p. 322—Herradura, Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 494—Concordia, Colombia; Salvin and Godman, Ibis, 1880, p. 117—Minca, Colombia; idem, Biol. Centr.-Amer., Aves, 1, p. 117, 1880—North America, south to Panama and Colombia; Berlepsch, Journ. Orn., 32, p. 282, 1884—Bucaramanga.

*Helminthophila peregrina* Sharpe, Cat. Bds. Brit. Mus., 10, p. 239, 1885 (monog.); Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta; Allen, Bull. Amer. Mus. N. H., 13, p. 178, 1900—Bonda, Onaca, Las Nubes, and Valparaiso, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 460, 1902 (monog., full bibliog.); Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 45, 1912—Las Quiguas, Carabobo (Feb. 22), Cumaná, and Mérida, Venezuela.

*Vermivora peregrina* Chapman, Bull. Amer. Mus. N. H., 36, p. 543, 1917—Miraflores, Santa Elena, and Buena Vista, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 457, 1922—La Concepción, Chirua, Bonda, Las Nubes, Valparaiso, Cincinnati, Dibulla, Pueblo Viejo, and Fundación, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 114, 1923—near Cojimar, Cuba; Griscom, Bull. Amer. Mus. N. H., 64, p. 326, 1932—Guatemala.

**Range.**—Northern North America, from the upper Yukon Valley, southern Mackenzie, northern Manitoba, Quebec, and Anticosti Island south to southern British Columbia, Alberta, and Manitoba, northern Minnesota and Michigan, Ontario, New York (Adirondacks), northern Maine, and New Hampshire; migrates mainly through the Mississippi Valley; winters from southern Mexico to Colombia and northern Venezuela (Cumaná; Las Quiguas, Carabobo; Mérida); occasional in Florida and Cuba; accidental in California and Greenland.

100: Maine (New Vineyard, 1; Upton, 6); New Jersey (Englewood, 3); Illinois (Addison, 1; Chicago, 4; Deerfield, 3; Fox Lake, 4; Henry, 8; Joliet, 3; Lake Forest, 11; Worth, 1); Wisconsin (Beaver Dam, 11); Iowa (Burlington, 2); North Carolina (Buncombe County, 1); Tennessee (unspecified, 1); Mississippi (Vicksburg, 2); Texas (Laredo, 1); Mexico (Guerrero, 1; Yucatan, Cozumel Island, 2); Guatemala (Los Amates, 1; Mazatenango, 6; Patulul, Solola, 1; San José, 1); Nicaragua (San Gerónimo, 3); Costa Rica (Guayábo, 15; Turrialba Station, 1; Volcan de Turrialba, 2); West Indies (Grand Cayman, 3); Venezuela (Caracas, 1).

**\*Vermivora celata celata (Say). ORANGE-CROWNED WARBLER.**

*Sylvia celatus(a)* Say, in Long, Exped. Rocky Mts., 1, p. 169 (note), 1823—Engineer Cantonment, near Council Bluffs=Omaha, Nebraska (type deposited in Peale's Museum, doubtless lost); Bonaparte, Amer. Orn., 1, p. 45, pl. 5, fig. 2, 1825—Engineer Cantonment (descr. and fig. of type).

*Helminthophaga celata* var. *obscura* Ridgway, in Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 192, pl. 11, fig. 6, 1874—Enterprise, Florida (type in U. S. National Museum).

*Helminthophila celata* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 244, 640, 1885 (part).

*Helminthophila celata celata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 462, 1902 (part).

*Helminthophila celata* subsp. *H. obscura* Sharpe, Cat. Bds. Brit. Mus., 10, p. 246, 1885—Georgia and Florida (in winter).

*Vermivora celata celata* Oberholser, Auk, 22, p. 242, 1905 (crit., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 197, 1928—Lower California.

*Range*.—Alaska, excepting the coast region from Cook Inlet southward, and the Canadian territories of Yukon, Mackenzie, Athabasca, and central Keewatin; in migration south to Washington, Arizona, Texas, Florida, South Carolina, New England, and eastern Mexico (Hidalgo).

19: Illinois (Chicago, 2; Deerfield, 3); Florida (Gainesville, 4; Wacissa River, 1); Louisiana (Buras, 2); Texas (El Paso, 1; Falfurrias, 1; Harlingen, 1; Ingram, Kerr County, 1); Mexico (Tampico, 3).

**\*Vermivora celata orestera Oberholser.<sup>1</sup> ROCKY MOUNTAIN ORANGE-CROWNED WARBLER.**

*Vermivora celata orestera* Oberholser, Auk, 22, p. 243, 1905—Willis, New Mexico (type in U. S. National Museum); Smith, Condor, 12, p. 99, 1910—lower Rio Grande (Oct. 28); Grinnell, Pac. Coast Avifauna, 11, p. 146, 1915—California; Oberholser, Auk, 34, p. 326, 1917 (crit., range); Swarth, Univ. Calif. Pub. Zool., 24, p. 286, 1922—Stikine Valley, British Columbia; idem, l.c., 30, p. 136, 1924—Atlin region, British Columbia; Grinnell, l.c., 32, p. 197, 1928—Lower California (Cape region); Jewett, Condor, 30, p. 357, 1928—Hart Mountains, Lake County, Oregon (Sept. 20–21); van Rossem, Trans. San Diego Soc. N. H., 6, p. 282, 1931—Sonora.

*Vermivora celata orestura* Allert, Auk, 47, p. 570, 1930—Giard, Clayton County, Iowa (May 12).

<sup>1</sup> *Vermivora celata orestera* Oberholser: Similar to *V. c. celata*, but larger and much more yellowish, both above and below.

Though not admitted in the latest edition of the A. O. U. Check List, Grinnell, Miller, and Swarth believe the Rocky Mountain Orange-crowned Warbler to be a recognizable form. Further researches about the exact limits of its breeding range are, however, required.

*Helminthophila celata orestera* Miller, Bull. Amer. Mus. N. H., 21, p. 367, 1905—Escuinapa, Sinaloa (crit.); idem, l.c., 22, p. 180, 1906—Rio Sestin, Durango.

*Helminthophila celata* (not *Sylvia celata* Say) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 244, 640, 1885 (part).

*Helminthophila celata celata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 462, 1902—part, Rocky Mountains.

**Range.**—Rocky Mountains from northern British Columbia (Atlin River and Stikine Valley) south to southeastern California, southern Arizona, and New Mexico; winters south to the Mexican states of Tamaulipas, Puebla, Morelos, Guerrero, Michoacan, Jalisco, and southern Lower California (Oberholser).

10: Montana (Columbia Falls, 2); South Carolina (unspecified, 1); Texas (El Paso, 1); New Mexico (Mimbres, 5); Arizona (Fort Grant, 1).

**\**Vermivora celata lutescens* (Ridgway). LUTESCENT WARBLER.**

*Helminthophaga celata* var. *lutescens* Ridgway, Amer. Journ. Sci. Arts, (3), 4, p. 457, Dec., 1872—"Pacific coast, from Radiak [sic] to Cape St. Lucas" (type, from Kadiak Island, in U. S. National Museum).

*Helminthophila lutescens* Sharpe, Cat. Bds. Brit. Mus., 10, p. 246, 1885 (monog.).

*Helminthophila celata lutescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 466, 1902 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 21, p. 367, 1905—Escuinapa, Sinaloa; idem, l.c., 22, p. 180, 1906—Rio Sestin, Durango; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 127, 1907—Tecpam, Guatemala.

*Vermivora celata lutescens* Oberholser, Auk, 22, p. 245, 1905 (crit., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 198, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 282, 1931—Sonora.

**Range.**—Pacific coast of the United States from Cook Inlet, Alaska, south to the San Bernardino Mountains of southern California; winters from Chihuahua to Guatemala and in southern Lower California.

14: British Columbia (Boundary Bay, 1); Oregon (near Salem, 1; Mercer, 1); California (Calito, 1; Eureka, 1; Contra Costa County, 1; Los Gatos, 1; Monterey, 2; Oakland, 1; San Geronimo, 1); Mexico (Lower California, La Paz, 2); Guatemala (Sierra Santa Elena, 1).

**\**Vermivora celata sordida* (Townsend). DUSKY WARBLER.**

*Helminthophila celata sordida* Townsend, Proc. U. S. Nat. Mus., 13, p. 139, 1890—San Clemente Island, California (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 467, 1902 (monog., full bibliog.).

*Vermivora celata sordida* Oberholser, Auk, 22, p. 245, 1905 (crit., range); Townsend, Bull. Amer. Mus. N. H., 48, p. 22, 1923—Santa Margarita Island and Cape San Lucas, Lower California; Grinnell, Univ. Calif. Pub. Zool., 32, p. 198, 1928—Lower California.

*Range*.—San Clemente, Santa Catalina, Santa Cruz, and Santa Rosa Islands, California, and Todos Santos Islands, Lower California; also on the mainland, in the vicinity of San Diego and probably south to El Rosario, latitude 30°; wintering on the adjacent mainland, casually to the San Francisco Bay region (Berkeley, Palo Alto, etc.).

6: California (Long Beach, 1; Los Angeles County, 1; Pasadena, 1; Santa Cruz, 1; San Diego, 1; Santa Catalina Island, 1).

**\**Vermivora ruficapilla ruficapilla* (Wilson). NASHVILLE WARBLER.**

*Sylvia ruficapilla* Wilson, Amer. Orn., 3, p. 120, pl. 27, fig. 3, 1811—near Nashville, Tennessee (type in Peale's Museum, doubtless lost).

*Sylvia rubricapilla* Wilson, Amer. Orn., 6, p. xv, 1812—new name for *Sylvia ruficapilla* Wilson.

*Sylvia leucogastra* Stephens, in Shaw, Gen. Zool., 10, (2), p. 622, 1817—new name for *Sylvia ruficapilla* Wilson.

*Sylvia nashvillei* Vieillot, Tabl. Enc. Méth., Orn., livr. 89, p. 451, 1820—based on *Sylvia ruficapilla* Wilson.

[*Helminthophaga ruficapilla*] var. *ocularis* Ridgway, in Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 191, 1874—Chicago, Illinois (type in U. S. National Museum).

*Helminthophaga ruficapilla* Winge, Medd. Grønland, 21, p. 281, 1899—Greenland (Godthaab, Oct. 10, 1823; Fiskenaes, Aug. 31, 1840).

*Helminthophila ruficapilla* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 242, 640, 1885 (part).

*Vermivora ruficapilla ruficapilla* Griscom, Bull. Amer. Mus. N. H., 64, p. 325, 1932—Guatemala (Sacupulas and San Lucas).

*Helminthophila rubricapilla rubricapilla* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 468 (monog., full bibliog.).

*Vermivora rubricapilla rubricapilla* Phillips, Auk, 28, p. 84, 1911—Tamaulipas (Matamoros, San Fernando, Galindo, Rio Martinez, Montelunga).

*Range*.—North America, from central Saskatchewan and Ontario, southern Quebec, and Cape Breton Island south to Nebraska, northern Illinois, Pennsylvania, and New Jersey, and Connecticut; wintering from Vera Cruz and Chiapas to Guatemala, casually in Florida and southern Texas; accidental in Greenland.

41: New Hampshire (Warner, 1); Massachusetts (Belmont, 1; Cliftondale, 1; Lexington, 1; Natick, 2; Sawyers, 1); Connecticut

(East Hartford, 5; Suffield, 1); New Jersey (Englewood, 2); Michigan (Kalamazoo, 1); Illinois (Beach, Lake County, 2; Chicago, 4; Deerfield, 1; Henry, 2; Joliet, 1; Lake Forest, 3; Warsaw, 1); Wisconsin (Beaver Dam, 3; Madison, 1; Woodruff, Vilas County, 1); South Carolina (St. Helena Island, 1); Arkansas (Winslow, 1); Texas (Boile, 1; Brownsville, 1; Corpus Christi, 1); Mexico (Iguala, Guerrero, 1).

**\**Vermivora ruficapilla ridgwayi* van Rossem. CALAVERAS WARBLER.**

[*Helminthophaga ruficapilla*] var. *gutturalis* (not *Compsothlypis gutturalis* Cabanis, 1860) Ridgway, in Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 191 (in text), 1874—Fort Tejon, California, and East Humboldt Mountains, Nevada (type, from East Humboldt Mountains, Nevada, in U. S. National Museum).

*Vermivora ruficapilla ridgwayi* van Rossem, Proc. Biol. Soc. Wash., 42, p. 179, 1929—new name for *Helminthophaga ruficapilla* var. *gutturalis* Ridgway, preoccupied; idem, Trans. San Diego Soc. N. H., 6, p. 281, 1831—Sonora (San Javier, Saric, Chinobampo); Griscom, Bull. Amer. Mus. N. H., 64, p. 325, 1932—Guatemala (Finca La Primavera, Momostenango, Barillos, San Lucas).

*Helminthophila ruficapilla* (not *Sylvia ruficapilla* Wilson) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 242, 640, 1885 (part).

*Helminthophila ruficapilla gutturalis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 470, 1902 (monog., full bibliog.).

*Vermivora ruficapilla gutturalis* Grinnell, Univ. Calif. Pub. Zool., 12, p. 193, 1914—lower Colorado Valley (crit.); idem, l.c., 32, p. 197, 1928—northern Lower California.

**Range.**—Western North America, from southern part of British Columbia south to the central Sierra Nevada of California, eastern Oregon, and Idaho; winters south to southwestern Mexico (states of Puebla, Oaxaca, Guerrero, Jalisco, and Colima); in migration to Lower California and Texas.

15: British Columbia (Okanagan, 3); Oregon (Logan, 2); California (Chaparral, Butte County, 1; Clipper Gap, Placer County, 1; Donner, Placer County, 1; Fort Jones, 1; Fyffe, 1; Sierra City, 3; Sweetwater River, southern California, 1); Mexico (Iguala, Guerrero, 1).

**\**Vermivora virginiae* (Baird). VIRGINIA'S WARBLER.**

*Helminthophaga virginiae* Baird, in Baird, Cassin, and Lawrence, Birds N. Amer., Atlas, p. VII (note), pl. 79, fig. 1, 1860—Fort Burgwyn, New Mexico (type in U. S. National Museum).

*Helminthophila virginiae* Sharpe, Cat. Bds. Brit. Mus., 10, p. 247, 1885 (monog.); Allen and Brewster, Bull. Nutt. Orn. Cl., 8, p. 155, 1883



—Colorado Springs, Colorado (plumages); Scott, Auk, 5, p. 33, 1888—Catalina Mountains, Arizona; Salvin and Godman, Ibis, 1889, p. 380—Bolaños, Jalisco, and Mexico; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 471, 1902 (monog., full bibliog.).

*Vermivora virginiae* van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1931—Guircocoba, Sonora.

*Range*.—Rocky Mountains from Nevada, Utah, and northern Colorado south to southern Arizona (Santa Catalina Mountains) and northeastern New Mexico; winters in Mexico south to Morelos, Guerrero, Michoacan, and Jalisco.

14: Colorado (Colorado Springs, 1); Utah (Salt Lake City, 1); Arizona (Florence, 1; Huachuca Mountains, 4); Mexico (Iguala, Guerrero, 7).

***Vermivora crissalis* (Salvin and Godman).<sup>1</sup> COLIMA WARBLER.**

*Helminthophila crissalis* Salvin and Godman, Ibis, (6), 1, p. 380, 1889—Sierra Nevada, Colima, Mexico (type in Salvin-Godman Collection, now in British Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 473, 1902 (ex Salvin and Godman).

*Vermivora crissalis* Bangs, Auk, 42, pp. 251-253, 1925—Tamaulipas (Miquihuana), Michoacan (Patamba), and Coahuila (Sierra Guadalupe) (crit., plumages); van Tyne, Auk, 46, p. 206, 1929—Boot Spring, Chisos Mountains, Texas.

*Vermivora browni* Griscom, Amer. Mus. Nov., 71, p. 4, 1923—Miquihuana, Tamaulipas (type in the American Museum of Natural History, New York).

*Range*.—Western Texas (Chisos Mountains) south through the mountains of Coahuila (Sierra Guadalupe) to western Tamaulipas (Miquihuana) and (? in winter) to Michoacan (Patamba) and Colima (Sierra Nevada).

**\**Vermivora luciae* (Cooper). LUCY'S WARBLER.**

*Helminthophaga luciae* Cooper, Proc. Calif. Acad. Nat. Sci., 2, p. 120, 1861—near Fort Mojave, near latitude 35° in the Colorado Valley, Arizona (type in U. S. National Museum; cotypes in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 12, p. 193, 1914).

*Helminthophila luciae* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 248, 641, 1885—Tucson and Fort Whipple, Arizona; Salvin and Godman, Ibis, 1889, p. 380—Bolaños and Santana (Lake Chapala), Jalisco; Fisher, N. Amer. Faun., 7, p. 117, 1893—lower Santa Clara Valley, Utah; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 473, 1902 (monog., full bibliog.).

<sup>1</sup> A very distinct species well-characterized by large size with heavy bill, and dull brownish coloration with reddish crown patch and yellowish rump, upper and under tail coverts. Its status and range have been discussed at length by the late Outram Bangs. Since that time, it has been found by van Tyne in the Chisos Mountains of Texas.

*Vermivora luciae* Grinnell, Univ. Calif. Pub. Zool., 12, p. 191, 1914—lower Colorado Valley (habits, nest, and eggs); idem, l.c., 32, p. 197, 1928—Colorado Delta, Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 281, 1931—Sonora (Tecoripa, Saric, Tésia).

**Range.**—Valleys of the lower Colorado and Gila rivers (Lower Sonoran zone) from Santa Clara Valley, Utah, south through New Mexico, Arizona, southeastern California, and extreme northern Lower California; winters in western Mexico south to Jalisco.

15: Arizona (Benson, 1; Calabasas, 6; Chiricahua Mountains, 1; Fairbanks, 1; Fort Mojave, 1; Tombstone, 1; Tucson, 3); Mexico (Iguala, Guerrero, 1).

**\**Vermivora gutturalis* (Cabanis). IRAZÚ WARBLER.**

*Compsothlypis gutturalis* Cabanis, Journ. Orn., 8, p. 329, 1860—[Irazú], Costa Rica (type in Berlin Museum).

*Parula gutturalis* Baird, Rev. Amer. Bds., 1, p. 172, 1864—Rancho Redondo, Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 93, 1868—Volcan "Yrazei"—Irazú, Costa Rica; Frantzius, Journ. Orn., 17, p. 292, 1869—Potrero Cerrado, Irazú, Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 182—Volcan de Chiriquí, Panama; Boucard, l.c., 1878, p. 52—Volcan de Irazú; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 123, pl. 8, fig. 3, 1880—Costa Rica (Volcan de Irazú, Rancho Redondo) and Panama (Volcan de Chiriquí); Ridgway, Proc. U. S. Nat. Mus., 5, p. 494, 1882—Volcan de Irazú; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 263, 643, 1885—Costa Rica (Irazú) and Volcan de Chiriquí, "Veragua."

*Oreothlypis gutturalis* Ridgway, Auk, 1, p. 169, 1884; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 106, 1887—Irazú; Ridgway, Proc. U. S. Nat. Mus., 14, p. 473, 1891—Achiote de Póas, Costa Rica (descr. juv.); Cherrie, l.c., 14, p. 524, 1891—Volcan de Póas, Costa Rica (descr. juv.); Bangs, Proc. New Engl. Zool. Cl., 3, p. 63, 1902—Boquete and Volcan de Chiriquí, Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 476, 1902—Costa Rica and Chiriquí (monog.); Carriker, Ann. Carnegie Mus., 6, p. 815, 1910—Costa Rica (Volcan de Turrialba, El Copey, Las Vueltas, La Lagunaria de Dota, San Juan de Irazú, Achiote de Póas, Escazú, Azahar de Cartago, Ujurrás de Térraba); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 275, 1910—Coliblanco and Volcan de Turrialba, Costa Rica.

**Range.**—High mountains of Costa Rica and extreme western Panama (Volcan de Chiriquí).

14: Costa Rica (Coliblanco, 5; Volcan de Irazú, 3; Volcan de Turrialba, 6).

**\**Vermivora superciliosa mexicana* (Bonaparte).<sup>1</sup> MEXICAN WARBLER.**

<sup>1</sup> *Vermivora superciliosa mexicana* (Bonaparte): Similar to *V. s. superciliosa*, but upper parts, notably the pileum lighter, and auricular region nearly the same color as the crown instead of blackish as in the typical race.

*Parula mexicana* (Lichtenstein MS.) Bonaparte,<sup>1</sup> *Consp. Gen. Av.*, 1, (2), p. 310, (end of) 1850—Mexico (type in Berlin Museum).

*Compsothlypis mexicana* (Lichtenstein MS.) Cabanis, *Mus. Hein.*, 1, p. 21, October, 1851—Mexico (type in Heine Collection, now in Municipal Museum, Halberstadt).

*Vermivora superciliosa mexicana* Miller and Griscom, *Amer. Mus. Nov.*, 183, p. 8, 1925—Mexico (Tamaulipas, Nuevo Leon, San Luis Potosi, Jalisco; crit.).

*Parula superciliosa* (not *Conirostrum superciliosum* Hartlaub) Sclater, *Proc. Zool. Soc. Lond.*, 26, p. 299, 1858—La Parada, Oaxaca; idem, *l.c.*, 27, p. 373, 1859—Talea, Oaxaca; idem, *Cat. Coll. Amer. Bds.*, p. 26, 1862—La Parada; Baird, *Rev. Amer. Bds.*, 1, p. 171, 1864—part, Mexico (Orizaba); Sumichrast, *Mem. Bost. Soc. N. H.*, 1, p. 545, 1869—Orizaba and Moyoapam, Vera Cruz; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 1, p. 122, 1880—part, Mexico (Orizaba, Moyoapam, Terra Fria, Talea, La Parada); Sharpe, *Cat. Bds. Brit. Mus.*, 10, pp. 255, 642, 1885—part, spec. a-d, g-k, La Parada, near Mexico City, Ciudad Durango, and Oaxaca, Mexico.

*Oreothlypis superciliosa* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 2, p. 477, 1902—part, highlands of Mexico (states of Chihuahua, Durango, Jalisco, Michoacan, Puebla, Vera Cruz, Hidalgo, Guerrero, and Oaxaca); Phillips, *Auk*, 28, p. 84, 1911—Tamaulipas (Rampahuila, Montelunga, Galindo, Realito).

*Range*.—Highlands of Mexico, from Chihuahua, Nuevo Leon, and San Luis Potosi south to Guerrero and Oaxaca.

3: Mexico (near Mexico City, 2; Oaxaca, 1).

**\**Vermivora superciliosa superciliosa* (Hartlaub). HARTLAUB'S WARBLER.**

*Conirostrum superciliosum* Hartlaub, *Rev. Zool.*, 7, p. 215, 1844—Guatemala (type in Bremen Museum).

*Parula superciliosa* Sclater and Salvin, *Ibis*, 1859, p. 10—Guatemala; Baird, *Rev. Amer. Bds.*, 1, p. 171, 1864—part, Guatemala; Salvin and Godman, *Biol. Centr.-Amer.*, Aves, 1, p. 122, pl. 8, fig. 2, 1880—part, Guatemala (Quezaltenango, Volcan de Fuego, ridge above Chuacas, and Santa Barbara); Sharpe, *Cat. Bds. Brit. Mus.*, 10, pp. 255, 642, 1885—part, spec. e, f, l-o, Guatemala (Volcan de Fuego, Calderas, Santa Barbara).

*Oreothlypis superciliosa* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 2, p. 477, 1902—part, Guatemala, and Chiapas, Mexico; Dearborn, *Field Mus. Nat. Hist.*, Orn. Ser., 1, p. 127, 1907—Tecpan, Guatemala.

*Vermivora superciliosa superciliosa* Miller and Griscom, *Amer. Mus. Nov.*, 183, p. 8, 1925—Guatemala (crit.); Griscom, *Bull. Amer. Mus. N. H.*,

<sup>1</sup> From the evidence produced by Mr. Zimmer (*Field Mus. Nat. Hist.*, Zool. Ser., 16, pp. 68-69, 122, 1926), Bonaparte's account would appear to have priority over Cabanis', unless the advance sheets of the "*Museum Heineanum*," which were in circulation long before the final issue of the work in October, 1851, be considered as publication.

64, p. 326, 1932—Guatemala (Chichicastenango, Momostenango, San Mateo, La Montañita, San Lucas, Tecpam, Quezaltenango).

*Range*.—Highlands (Subtropical to Temperate zones) of Guatemala and adjacent parts of Chiapas, southern Mexico.

3: Guatemala (near Tecpam, 3).

***Vermivora superciliosa parva* Miller and Griscom.<sup>1</sup> NICARAGUAN WARBLER.**

*Vermivora superciliosa parva* Miller and Griscom, Amer. Mus. Nov., 183, p. 7, 1925—near Jinotega, Nicaragua (type in the American Museum of Natural History, New York).

*Range*.—Highlands of Nicaragua (near Jinotega).

**Genus COMPSOTHLYPIS Cabanis**

*Chloris* (not of Cuvier, 1800) Boie, Isis, 1826, p. 972—type, by virtual monotypy, *Sylvia americana* Latham = *Parus americanus* Linnaeus.

*Sylvicola* (not of M. Harris, 1776) Swainson, Phil. Mag., (n.s.), 1, No. 6, p. 433, June, 1827—type, by subs. desig. (Swainson, Zool. Journ., 3, No. 10, p. 169, Sept., 1827), *Sylvia pusilla* Wilson.

*Parula* (not *Parulus* Spix, 1824) Bonaparte, Geog. Comp. List. Bds. Eur. & N. Amer., p. 20, 1838—type, by monotypy, *Parus americanus* Linnaeus.

*Compsothlypis* Cabanis, Mus. Hein., 1, p. 20, Oct., 1851—type, by subs. desig. (Gray, Cat. Gen. Subgen. Bds., p. 39, 1855), *Parus americanus* Linnaeus.

**\**Compsothlypis americana pusilla* (Wilson). NORTHERN PARULA WARBLER.**

*Sylvia pusilla* Wilson, Amer. Orn., 4, p. 17, pl. 28, fig. 3, 1811—Pennsylvania, Kentucky, and New York; Philadelphia accepted as type locality (type in Peale's Museum, evidently lost).

*Compsothlypis americana usneae* Brewster, Auk, 13, p. 44, 1886—Lake Umbagog, Maine (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 357, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 484, 1902 (monog., full bibliog.).

*Compsothlypis americana ramalinae* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, pp. 486, 783, 1902—"Mississippi Valley and district of the upper Great Lakes; breeding from Louisiana and Texas to Michigan, Wisconsin, and Minnesota" (neither type nor type locality designated); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 127, 1907—Gualan (Feb. 7) and San José (Mar. 7), Guatemala; Phillips, Auk, 28, p. 84, 1911—Tamaulipas (Matamoros, Aug. 22; Altamira, Dec. 16); Griscom, Bull. Amer. Mus. N. H., 64, p. 326, 1932—Guatemala (Gualan, Coban, San José).

<sup>1</sup> *Vermivora superciliosa parva* Miller and Griscom: Similar to typical *V. s. superciliosa* in color, but much smaller, with proportionately longer bill. Wing (adult male, the type), 56; tail, 39.2; bill, 11.

*Compsothlypis americana pusilla* Brewster, Auk, 35, p. 228, 1918 (nomencl.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 114, 1923—Cuba (Preston); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 504, 1927—Porto Rico, Vieques, Culebra, Louis Peña, St. Croix, St. Thomas, Tortola, and Virgin Gorda (winter); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 368, 1931—Hispaniola (winter).

*Compsothlypis americana* (not *Parus americanus* Linnaeus) Richmond, Proc. U. S. Nat. Mus., 16, p. 484, 1893—Rio Escondido, Nicaragua (one spec., Oct. 26); Clark, Proc. Bost. Soc. N. H., 32, p. 293, 1905—Barbados; Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Bahamas (winter).

*Parula americana* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 119, 1880—North America (in part), Central America south to Guatemala (Coban), Cuba, etc.; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 256, 642, 1885 (monog., in part); Feilden, Ibis, 1889, p. 481—Barbados; Winge, Medd. Grønland, 21, p. 282, 1899—South Greenland (one record); Nicoll, Ibis, 1904, pp. 571, 573, 575, 576—Montserrat, St. Kitts, St. Croix, and St. Thomas.

**Range.**—Eastern North America from eastern Nebraska, northern Minnesota, central Ontario, Anticosti Island, and Cape Breton Island south to Texas, Louisiana, and Maryland; winters in the Bahamas, Greater Antilles, Lesser Antilles (east to Montserrat and Antigua, rarely Barbados), and from eastern Mexico (Tamaulipas) south to Guatemala and Nicaragua (one record from Rio Escondido); casual in Wyoming and Colorado; accidental in Greenland.

165: Maine (Brewer, 1; New Vineyard, 1; Upton, 1); Massachusetts (Brookline, 2; Cliftondale, 1; Natick, 1; unspecified, 5); Connecticut (East Hartford, 6); New York (Boonville, 1; Miller Place, 1; Sennett, 1; Shelter Island, 1; Suffolk County, 1); New Jersey (Englewood, 2); Illinois (Chicago, 3; Lake Forest, 2; Mound City, 3; Ravinia, 1); Wisconsin (Beaver Dam, 3; Woodruff, Vilas County, 2); Arkansas (Cleburne County, 1); Mississippi (Vicksburg, 5); Louisiana (New Orleans, 1); Texas (Corpus Christi, 2; Ingram, Kerr County, 1); Yucatan (Cozumel Island, 5); Guatemala (Gualan, Zacapa, 1; San José, Escuintla, 1); West Indies (Great Bahama, 13; Bimini, 3; Nassau, New Providence, 1; Andros, 6; Eleuthera, 6; Watlings, 5; Santiago, Cuba, 1; Cayman Brac, 4; Jamaica, 15; Old Providence, 2; Haiti, 5; Santo Domingo, 23; Porto Rico, 6; St. Thomas, 4; Tortola, 1; Virgin Gorda, 2; St. Croix, 5; St. Eustatius, 3; St. Kitts, 4).

**\**Compsothlypis americana americana* (Linnaeus). SOUTHERN PARULA WARBLER.**

*Parus americanus* Linnaeus, Syst. Nat., 10th ed., 1, p. 190, 1758—based on "The Finch-Creeper" Catesby, Nat. Hist. Carolina, 1, p. 64, pl. 64; South Carolina.

*Motacilla eques* Boddaert, Tabl. Pl. Enl., p. 46, 1788—based on "Figuier cendré de la Caroline" Daubenton, Pl. Enl., pl. 731, fig. 1, and "Le Figuier cendré à collier" Buffon, Hist. Nat. Gén., 9, p. 442; Carolina and Canada.

*Motacilla ludoviciana* Gmelin, Syst. Nat., 1, (2), p. 983, 1789—based on "Le Figuier de la Louisiane" Brisson, Orn., 3, p. 500, pl. 26, fig. 4; part, Louisiana<sup>1</sup> (type in coll. of M. de Réaumur).

*Sylvia torquata* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 38, pl. 99, "1807" [=1808, possibly 1809]—"l'Amérique, depuis la Louisiane jusqu'au Canada, . . . en hiver dans la Caroline du Sud . . . dans les îles de Saint-Domingue et de Porto-Rico" (type in coll. of P. L. Vieillot).<sup>2</sup>

*Parula americana* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 256, 642, 1885 (monog., in part).

*Compsothlypis americana americana* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 481, 1902 (monog., full bibliog.); Todd, Ann. Carnegie Mus., 7, p. 431, 1911—Great Inagua, Bahamas (Feb. 19; crit.).

**Range.**—Southeastern United States from the District of Columbia south to Alabama and Florida; winters in Florida and the Bahamas (Great Inagua).

54: North Carolina (Raleigh, 7); South Carolina (Mount Pleasant, 1); Florida (East Pass, 2; Gainesville, 2; Key West, 1; Nassau County, 6; New River, 1; Mary Esther, 8; Miami Beach, 1; Starke, 1; Town Point, Santa Rosa County, 9; West Jupiter, 6); West Indies (Inagua Island, Bahamas, 9).

**\**Compsothlypis pitiayumi*<sup>3</sup> *nigrilora* (Coues). SENNETT'S WARBLER.**

*Parula nigrilora* Coues, Bull. U. S. Geol. and Geog. Surv. Terr., 4, No. 1, p. 11, Feb., 1878—Hidalgo, Texas (type in U. S. National Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 120, 1880—Rio Grande Valley; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 261, 643, pl. 11, fig. 2, 1885—part, Texas; Salvin and Godman, Ibis, 1889, p. 236—Tampico (Tamaulipas), Nuevo Leon, and Valles (San Luis Potosi), Mexico.

*Compsothlypis pitiayumi nigrilora* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 490, 1902 (monog., full bibliog.); Phillips, Auk, 28, p. 84, 1911—Tamaulipas (Matamoros, Altamira, Caballeros, Santa Leonor, Guiaves, Rio Cruz, Montelunga); Chapman, Auk, 42, p. 196, 1925 (crit.).

<sup>1</sup> The description appears to refer to the young male. The bird sent from Santo Domingo by M. Chervain is more likely to refer to *C. a. pusilla*.

<sup>2</sup> From the habitat assigned to the species it is evident that Vieillot included both *C. a. americana* and *C. a. pusilla* under *Sylvia torquata*, but description and figure clearly refer to the Southern Parula Warbler without a dusky band across the chest, while the winter range, Santo Domingo and Porto Rico, is that of *C. a. pusilla*. Moreover, Vieillot's name seems to have been largely intended as a substitute of *Parus americanus* and *Motacilla ludoviciana*, both of which are quoted in the synonymy.

<sup>3</sup> The *pitiayumi* series may ultimately prove to be conspecific with *C. americana*.

*Range*.—Valley of the lower Rio Grande in Texas south to Nuevo Leon, Tamaulipas, and southeastern San Luis Potosi (Valles).

6: Texas (Lonata, 1; Brownsville, 2; Cameron County, 1); Tamaulipas (Tampico, 1; Sierra Madre, 1).

***Compsothlypis pitiauyumi pulchra* Brewster. BEAUTIFUL OLIVE-BACKED WARBLER.**

*Compsothlypis pulchra* Brewster, Auk, 6, p. 93, 1889—Hacienda de San Rafael, Chihuahua, northwestern Mexico (cotypes in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 357, 1930).

*Compsothlypis pitiauyumi pulchra* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 491, 1902 (monog.); Chapman, Auk, 42, p. 198, 1925 (crit.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 282, 1931—Guircoba, Sonora.

*Parula nigrilora* (not of Coues) Sharpe, Cat. Bds. Brit. Mus., 10, p. 643, 1885—part, spec. d, Presidio, Sinaloa.

*Range*.—Pacific slope of western Mexico from southern Sonora (Guircoba) and Chihuahua (Hacienda San Rafael) to Jalisco (Barranca Ibarra).

***Compsothlypis pitiauyumi insularis* (Lawrence). TRES MARIAS WARBLER.**

*Parula insularis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 10, p. 4, Feb., 1871—part, Tres Marias Islands, Mexico (type in U. S. National Museum); idem, Proc. Bost. Soc. N. H., 14, p. 278, 1871—Tres Marias; idem, Mem. Bost. Soc. N. H., 2, p. 269, 1874—part, Tres Marias; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 121, 1880—part, Tres Marias; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 262, 643, 1885—part, spec. a-c, Tres Marias.

*Compsothlypis insularis* Nelson, North Amer. Faun., 14, p. 55, 1899—Tres Marias, Isabel Island, and coast of Nayarit (between San Blas and Santiago).

*Compsothlypis pitiauyumi insularis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 492, 1902—Tres Marias (monog.); Chapman, Auk, 42, p. 198, 1925—Tres Marias and coast of Nayarit (crit.); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 42, 1927—Maria Madre, and Labrados, Sinaloa.

*Compsothlypis pitiauyumi insularis* McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 311, 1926—Tres Marias (Maria Madre, Maria Magdalena, Isabel Island).

*Parula pitiauyumi* (not *Sylvia pitiauyumi* Vieillot) Baird, Rev. Amer. Bds., 1, p. 266, 1865—Tres Marias (crit.).

*Range*.—Tres Marias Islands (Maria Madre, Maria Magdalena, Isabel) and coastal region of western Mexico from Labrados, Sinaloa, to San Blas, Nayarit.

**\**Compsothlypis pitiauyumi graysoni* Ridgway.<sup>1</sup> SOCORRO WARBLER.**

<sup>1</sup> I cannot see in the Socorro Warbler anything but a strongly marked race of the Olive-backed Warbler.

*Compsothlypis graysoni* Ridgway, Man. N. Amer. Bds., p. 492, 1887—Socorro Island, Mexico (type in U. S. National Museum); Townsend, Proc. U. S. Nat. Mus., 13, p. 135, 1890—Socorro; Anthony, Auk, 15, p. 317, 1898—Socorro; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 492, 1902—Socorro (monog.); Chapman, Auk, 42, p. 199, 1925—Socorro and Lower California (crit.); Lamb, Condor, 27, p. 36, 1925—Todos Santos and El Oro, Lower California; McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 311, 1926—Grayson's Cove, Socorro; Grinnell, Univ. Calif. Pub. Zool., 32, p. 199, 1928—Lower California.

*Parula insularis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 10, p. 4, 1871—part, Socorro; idem, Proc. Bost. Soc. N. H., 14, p. 300, 1871—Socorro; idem, Mem. Bost. Soc. N. H., 2, p. 269, 1874—part, Socorro; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 121, 1880—part, Socorro; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 262, 643, 1885—part, spec. d, Socorro.

**Range.**—Socorro Island, Revillagigedo group; casual in southern Lower California (Todos Santos, Nov. 3, 1923, and July 23, 1924; El Oro, seen Feb. 5, 1924).

1: Socorro Island.

***Compsothlypis pitiauyumi inornata* (Baird). GUATEMALAN OLIVE-BACKED WARBLER.**

*Parula inornata* Baird, Rev. Amer. Bds., 1, p. 171, Nov., 1864—part, Choctum, Guatemala (type in Salvin-Godman Collection, now in British Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 120, pl. 8, fig. 1, 1880—part, Choctum, Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 260, 643, 1885—part, spec. f, g, Guatemala.

*Compsothlypis inornatus* Nelson, Auk, 15, p. 159, 1898—near Tuxtla Gutierrez, Chiapas, Mexico.

*Compsothlypis pitiauyumi inornata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 488, 1902—Guatemala and Chiapas (monog.); Chapman, Auk, 42, p. 199, 1925—part, Chiapas and Guatemala; Griscom, Bull. Amer. Mus. N. H., 64, p. 327, 1932—Guatemala.

*Parula brasiliiana* (not *Sylvia brasiliiana* Lichtenstein) Selater and Salvin, Ibis, 1860, p. 397—Guatemala.

**Range.**—Subtropical zone of southeastern Mexico, in State of Chiapas (Ocuilapa; near Tuxtla Gutierrez), and eastern Guatemala (Vera Paz).<sup>1</sup>

**\**Compsothlypis pitiauyumi speciosa* Ridgway.<sup>2</sup> CHIRIQUÍ OLIVE-BACKED WARBLER.**

<sup>1</sup> *Material examined.*—Guatemala: Vera Paz, 3.

<sup>2</sup> *Compsothlypis pitiauyumi speciosa* Ridgway: Similar in coloration to *C. p. pacifica*, but with only one wing band, the median wing coverts lacking all trace of white. Agreeing in wing markings with *C. p. inornata*, but much more richly colored, being indigo blue above instead of bluish slate gray and having the throat and chest strongly tinged with orange ochraceous in the male sex.

Specimens from Nicaragua, while verging toward *C. p. inornata*, seem to me better referred to the present form.



*Compsothlypis pitiauyumi speciosa* Ridgway, Auk, 19, p. 69, 1902—Boquete, Chiriquí, Panama (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 487, 1902—Nicaragua to Veragua (monog.); Bangs, Proc. New Engl. Zool. Cl., 3, p. 63, 1902—Boquete, Chiriquí; Carriker, Ann. Carnegie Mus., 6, p. 814, 1910—Costa Rica (Guayábo, Bonilla, Santa Maria de Dota, Juan Viñas, Carrillo, La Vijagua, Cariblanco de Sarapiquí, La Hondura); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 275, 1910—Guayábo and Coliblanco, Costa Rica; Chapman, Auk, 42, p. 200, 1925—western Panama and Costa Rica (crit.).

*Parula inornata* Baird, Rev. Amer. Bds., 1, p. 171, 1864—part, Angostura and Dota, Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 93, 1868—Costa Rica (Barranca, Dota, Angostura); Salvadori, Atti Acad. Sci. Torino, 4, p. 172, 1868—Costa Rica (crit.); Frantz, Journ. Orn., 17, p. 292, 1869—Costa Rica; Salvin, Proc. Zool. Soc. Lond., 1870, p. 182—Boquete de Chitrá, Veragua, and Volcan de Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 120, 1880—part, Costa Rica and Panama (Volcan de Chiriquí, Boquete de Chitrá, Calobre); Nutting, Proc. U. S. Nat. Mus., 6, p. 391, 1883—Island of Ometépe, Nicaragua; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 260, 643, 1885—part, spec. a-e, h-o, Costa Rica and Panama (Chiriquí, Boquete de Chitrá).

*Compsothlypis inornata* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 106, 1887—Naránjo de Cartago and Dota, Costa Rica.

*Compsothlypis pitiauyumi inornata* Chapman, Auk, 42, p. 199, 1925—part, Nicaragua.

**Range.**—Caribbean side of Nicaragua, Costa Rica, and western Panama south to Veragua.

13: Costa Rica (Carrillo, 1; Guayábo, 7; Coliblanco, 1; Buena Vista de San Carlos, 1; Tuís, 1; Peralta, 2).

### ***Compsothlypis pitiauyumi nana* Griscom.<sup>1</sup> LESSER OLIVE-BACKED WARBLER.**

*Compsothlypis pitiauyumi nana* Griscom, Amer. Mus. Nov., 282, p. 8, 1927—Cape Garachiné, eastern Panama (type in the American Museum of Natural History, New York); idem, Bull. Mus. Comp. Zool., 69, p. 183, 1929—Cana, Panama.

**Range.**—Tropical zone of eastern Panama (Cape Garachiné and Cana, Darien).

### **\**Compsothlypis pitiauyumi pacifica* (Berlepsch and Taczanowski).<sup>2</sup> PACIFIC OLIVE-BACKED WARBLER.**

<sup>1</sup>*Compsothlypis pitiauyumi nana* Griscom: "Most closely resembling *C. p. elegans* in coloration, but green patch on back greatly reduced in area; size much smaller. Wing (adult female), 46½; tail, 30." (Griscom, l.c.).

This race, though known only from females, appears to be distinguished by its dimensions, which are much inferior to those of the corresponding sex of *C. p. elegans*. In size it apparently forms the transition to *C. p. pacifica*, from which it differs by darker coloration and broader white wing bands.

<sup>2</sup>*Compsothlypis pitiauyumi pacifica* (Berlepsch and Taczanowski): Smaller and much darker (indigo blue) above than *C. p. elegans*; the white wing bands much

*Parula pitaiyumi pacifica* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 286, 1884—Surupata and Cayandede, Ecuador (type, from Surupata, in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 162, 1927); Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 71, 1911—Gualea, Ecuador; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 77, 1922—Mindo and Gualea, Ecuador.

*Parula brasiliiana* (not *Sylvia brasiliiana* Lichtenstein) Sclater, Proc. Zool. Soc. Lond., 27, p. 137, 1859—Pallatanga, Ecuador; idem, l.c., 28, pp. 84, 273, 291, 1860—Nanegal, Babahoyo, and Esmeraldas, Ecuador.

*Parula pitaiyumi* (not *Sylvia pitaiyumi* Vieillot) Sclater, Cat. Coll. Amer. Bds., p. 26, 1862—part, spec. a, b, Pallatanga and Babahoyo; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 236, 1869—Puna Island, Ecuador; Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 319—Tumbez, Peru; Berlepsch and Taczanowski, l.c., 1883, p. 541—Chimbo, Ecuador; Taczanowski, Orn. Pér., 1, p. 463, 1884—part, Tumbez, Lechugal, and Paucal, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 259, 643, 1885—part, spec. i, k, l, v, "Quito," Babahoyo, Pallatanga, and Balzar, Ecuador; Hartert, Nov. Zool., 5, p. 479, 1898—Chimbo, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 7, 1899—Gualea, Intac, Vinces, and Balzar, Ecuador.

*Compsothlypis pitaiyumi pacifica* Chapman, Bull. Amer. Mus. N. H., 36, p. 544, 1917—Ricaurte, Nariño, Colombia; idem, Auk, 42, p. 203, 1925—(monog.); idem, Bull. Amer. Mus. N. H., 55, p. 592, 1926—western Ecuador (numerous localities) and northwestern Peru (Paletillas, Palambla).

*Parula inornata* (not of Baird) Goodfellow, Ibis, 1901, p. 314—San Nicolas, Guanacillo, and Rio Blanco, western Ecuador.

*Range.*—Tropical zone of extreme southwestern Colombia (Ricaurte, Nariño), western Ecuador, and extreme northwestern Peru (Tumbez, Lechugal, Paletillas, Palambla, Paucal).

3: Ecuador (Puente de Chimbo, 2; Bucay, 1).

**\**Compsothlypis pitaiyumi elegans* Todd.<sup>1</sup> ELEGANT OLIVE-BACKED WARBLER.**

reduced in extent; throat and chest in adult males deeper orange ochraceous. Similar to *C. p. speciosa* in intense coloration, but median upper wing coverts tipped with white, forming a second band across the wing. Wing, 52–54, (female) 48–50.

Thirty specimens from western Ecuador (Esmeraldas to Guayaquil) and one from Tumbez examined.

<sup>1</sup> *Compsothlypis pitaiyumi elegans* Todd: Very similar to *C. p. pitaiyumi*, but upper part of the head and nape brighter bluish and lower back darker bluish gray; size perhaps on average smaller.

This is not a strongly marked race, and single specimens cannot always be distinguished from typical *pitaiyumi*; but when series are compared the brighter bluish tone of the upper parts in the northern birds is undeniable. While adult males from different parts of Venezuela and Colombia agree in color, those from Trinidad are more deeply colored beneath, having the throat and chest of a

*Compsothlypis pitiayumi elegans* Todd, Ann. Carnegie Mus., 8, p. 204, May, 1912—Anzoategui, Lara, Venezuela (type in Carnegie Museum); Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 208, 1913—Cariaquito, Venezuela; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 151, 1916—Altagracia and Agua Salada de Ciudad Bolívar, Orinoco River, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 544, 1917—Colombia, western Andes (Caldas, San Antonio, Las Lomitas, Gallera), central Andes (Rio Frio, Miraflores, Salento, El Eden, La Sierra, La Candela), and eastern Andes (Quetame); Todd and Carriker, Ann. Carnegie Mus., 14, p. 453, 1922—La Concepción, San Miguel, Bonda, Minca, Don Diego, Mamatoco, La Tigrera, Las Vegas, and Cincinnati, Santa Marta region, Colombia (crit.); Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 154, 1924—Loma Redonda and Galipán, Cerro del Avila, Venezuela (crit.); Chapman, Auk, 42, p. 201, 1925—part (excl. Roraima; crit.); idem, Amer. Mus. Nov., 191, p. 10, 1925—Cocallar, northeastern Venezuela; Darlington, Bull. Mus. Comp. Zool., 71, p. 412, 1931—Rio Frio, Magdalena, Colombia.

*Compsothlypis brasiliana* (not *Sylvia brasiliana* Lichtenstein) Sclater, Proc. Zool. Soc. Lond., 23, p. 143, 1855—"Bogotá," Colombia.

*Parula pitiayumi* (not *Sylvia pitiayumi* Vieillot) Sclater, Cat. Coll. Amer. Bds., p. 26, 1862—part, spec. c, d, "Bogotá"; Baird, Rev. Amer. Bds., 1, p. 170, 1864—part, "Bogotá," and Trinidad; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, pp. 166, 627—Caripé and Tucacas, Venezuela; Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Forte do Rio Branco, Brazil (spec. examined); Wyatt, Ibis, 1871, p. 322—Cocuta Valley, Colombia; Salvin and Godman, Ibis, 1880, p. 117—Minca, Colombia; Berlepsch, Journ. Orn., 32, p. 282, 1884—Bucaramanga, Colombia; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 259, 643, 1885—part, spec. m, n, w-z, "Bogotá," Minca, Caripé, Venezuela; Berlepsch and Hartert, Nov. Zool., 9, p. 10, 1902—Altagracia, Orinoco River, Venezuela.

*Compsothlypis pitiayumi* Chapman, Bull. Amer. Mus. N. H., 6, p. 24, 1894—Princetown and Monos Island, Trinidad; Phelps, Auk, 14, p. 363, 1897—San Antonio, Venezuela; Hellmayr, Nov. Zool., 13, p. 6, 1906—Chaguaramas, Pointe Gourde, and Caparo, Trinidad; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 250, 1909—Margarita Island.

*Compsothlypis pitiayumi pitiayumi* Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 356, 1908—Pointe Gourde and Carenage, Trinidad; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 46, 1912—Las Quiguas and Cumbre Chiquita, Venezuela (crit.).

deeper ochraceous tone with less yellow on the chin, and the abdomen darker yellow. They are, however, nearly matched by certain Colombian skins, and as two males from Tobago again resemble the Venezuelan birds in coloration, the variation is likely to be individual rather than geographic. Three Tobago birds average slightly larger with stronger bills. Two (male and female) from the Rio Branco are similar to others from Venezuela.

*Additional material examined.*—Tobago: Man o' War Bay, 3.—Trinidad: Caparo, 10.—Venezuela: San Antonio, Sucre, 2; Loma Redonda, Caracas, 5; Galipán, Cerro del Avila, 2; Las Quiguas, Carabobo, 3; Cumbre Chiquita, 1; San Esteban Valley, Carabobo, 2; El Escorial, Mérida, 3; El Valle, Mérida, 1; Altagracia, Orinoco River, 2.—Brazil: Forte do São Joaquim, Rio Branco, 2.—Colombia: "Bogotá," 5; Rio Lima, Cauca, 2.

*Compsothlypis pitiayumi pacifica* (not *Parula pitiayumi pacifica* Berlepsch and Taczanowski) Bangs, Proc. Biol. Soc. Wash., 12, pp. 143, 180, 1898—Santa Marta and Palomina; Allen, Bull. Amer. Mus. N. H., 13, p. 178, 1900—Onaca and Valparaiso, Colombia.

*Mniotilta venusta* (not *Sylvia venusta* Temminck) Léotaud, Ois. Trinidad, p. 181, 1866—Trinidad.

*Range*.—Islands of Tobago and Trinidad; Venezuela from the north coast south to the Orinoco Valley; extreme northern Brazil (Forte do São Joaquim, Rio Branco); Colombia, excepting the extreme southwestern section (Nariño).

10: Venezuela (Margarita Island, 2; Caracas, 2; Rio Aurare, Zulia, 1; Conejos, Mérida, 1); Colombia (Tenasuca, above La Mesa, Cundinamarca, 1; "Bogotá," 1; Miraflores, east of Palmira, central Andes, 1; Rio Lima, Cauca, 1).

***Compsothlypis pitiayumi roraimae* Chapman.<sup>1</sup> RORAIMA  
OLIVE-BACKED WARBLER.**

*Compsothlypis pitiayumi roraimae* Chapman, Amer. Mus. Nov., 341, p. 4, 1929—Arabupu, Roraima, Venezuela (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 63, p. 114, 1931—Roraima and Duida, Venezuela.

*Parula pitiayumi* (not *Sylvia pitiayumi* Vieillot) Salvin, Ibis, 1885, p. 202—Mount Roraima; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 259, 643, 1885—part, spec. a', b', Roraima.

*Compsothlypis elegans* (not of Todd) Chubb, Bds. Brit. Guiana, 2, p. 402, 1921—Mount Roraima.

*Compsothlypis pitiayumi elegans* Chapman, Auk, 42, p. 201, 1925—part, Mount Roraima.

*Range*.—Subtropical zone of Mounts Roraima and Duida, in southern Venezuela.

**\**Compsothlypis pitiayumi alarum* Chapman.<sup>2</sup> PERUVIAN OLIVE-  
BACKED WARBLER.**

<sup>1</sup> *Compsothlypis pitiayumi roraimae* Chapman: Exceedingly similar to *C. p. elegans*, but olive green interscapular area more restricted; flanks tinged with olivaceous; tarsi and toes blackish rather than brown; lower mandible tipped with blackish. Wing (male), 56; tail, 42; bill, 10.

Two specimens of this seemingly recognizable race, both from Roraima, have been examined. It evidently replaces *C. p. elegans* in the subtropics of Mounts Roraima and Duida.

[Two examples from the upper Rio Branco (Forte do São Joaquim), in northern Brazil, show none of the characters of the upland bird, and appear to be inseparable from *C. p. elegans*, of Venezuela.]

<sup>2</sup> *Compsothlypis pitiayumi alarum* Chapman: Much like *C. p. elegans*, but wings slightly longer, and median upper wing coverts wholly without, or with but a trace of white. Wing (adult male), 59–60; tail, 41–42.

With the limited material at my command I am hardly in a position to more than outline the range of this form. While a female from Machay (like a topo-

*Compsothlypis pitiayumi alarum* Chapman, Amer. Mus. Nov., 143, p. 2, Nov., 1924—Chaupe, east of Huancabamba, Peru (type in the American Museum of Natural History, New York); idem, Auk, 42, p. 204, 1925—northern Peru and eastern Ecuador (crit.); idem, Bull. Amer. Mus. N. H., 55, p. 593, 1926—Zamora, Sabanilla, lower Mount Sumaco, and below Oyacachi, eastern Ecuador.

*Parula pitiayumi alarum* Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 424, 1930—Chinchao, Huánuco, Peru (crit.).

*Parula pitiayumi* (not *Sylvia pitiayumi* Vieillot) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 223—Tambillo, Peru; idem, Orn. Pér., 1, p. 463, 1884—part, Tambillo; idem and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 74—Mapoto and Machay, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 643, 1885—part, spec. u, San José, Ecuador; Goodfellow, Ibis, 1901, p. 314—Baeza, Ecuador.

*Range*.—Subtropical zone of eastern Ecuador and northern Peru east of the Andes, south to Dept. Huánuco (Chinchao).

3: Peru (Chinchao, 3).

### ***Compsothlypis pitiayumi melanogenys* Todd.<sup>1</sup> BOLIVIAN OLIVE-BACKED WARBLER.**

*Compsothlypis pitiayumi melanogenys* Todd, Proc. Biol. Soc. Wash., 37, p. 123, July, 1924—Yungas of Cochabamba, Bolivia (type in Carnegie Museum); Chapman, Auk, 42, p. 204, 1925—central Peru to Bolivia (crit.).

*Sylvia venusta* (not of Temminck) d'Orbigny, Voy. Amér. Mérid., Ois., p. 218, 1836—part, Yungas and Sicasica, Bolivia.

*Parula pitiayumi* (not *Sylvia pitiayumi* Vieillot) Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 16—Huiro, Peru; idem, l.c., 1879, p. 593—part, Yungas, Sicasica, and Tilotilo, Bolivia; Taczanowski, Orn. Pér., 1, p. 463, 1884—part, Huiro; Sharpe, Cat. Bds. Brit. Mus., 10, p. 259, 1885—part, Bolivia.

typical male from Chaupe) has no trace of white on the median wing coverts, a male from Mapoto shows a distinct, though narrow, second wing band. I am, therefore, inclined to follow Mr. Zimmer in extending the range of *alarum* to the Department of Huánuco, though further material from that region is urgently needed to confirm this identification.

*Additional material examined*.—Eastern Ecuador: Mapoto, 1; Machay, 1; Baeza, 1.—Peru: Chaupe, 1.

<sup>1</sup> *Compsothlypis pitiayumi melanogenys* Todd: Similar to *C. p. elegans*, but upper parts somewhat darker indigo blue, more like *C. p. pacifica*; lower surface more richly colored; white area on lateral rectrices generally more extensive. Wing, 56–58, (female) 51–53; tail, 40–43.

This race sometimes so closely approaches *C. p. elegans* as to be barely distinguishable. The deeper coloration, especially of the upper parts, holds in most cases, but the white tail markings are subject to much variation. There are two white wing bands, very nearly as well developed as in *C. p. elegans*, and this feature, in conjunction with its smaller size, serves to separate it from *C. p. alarum*. Three Peruvian specimens compare well with a series from the Yungas of La Paz.

*Material examined*.—Bolivia: Yungas, 1; Yungas of La Paz (Songo, etc.), 5.—Peru: Santa Ana, 2; Garita del Sol, 1.

*Compsothlypis pitiayumi* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 330—Garita del Sol, Dept. Junín, Peru; idem, Ornith., 13, p. 74, 1906—Santa Ana, Peru.

*Compsothlypis pitiayumi pitiayumi* Hellmayr, Nov. Zool., 28, p. 243, 1921—part, spec. No. 1, Yungas, Bolivia.

*Compsothlypis pitiayumi elegans* (not of Todd) Chapman, Bull. U. S. Nat. Mus., 117, p. 105, 1921—Santa Ana, Idma, Chauillay, and San Miguel Bridge, Peru.

*Range*.—Subtropical zone of southern Peru (north to Dept. Junín) and western Bolivia (depts. of La Paz and Cochabamba).

**\**Compsothlypis pitiayumi pitiayumi* (Vieillot). OLIVE-BACKED WARBLER.**

*Sylvia pitiayumi* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 276, 1817—based on "Pico de Punzon celeste pecho de oro" Azara, No. 109; Paraguay.

*Sylvia brasiliensis* Lichtenstein, Verz. Doubl. Zool. Ber. Mus., p. 35, 1823—Brazil (type in Berlin Museum).

*Sylvia plumbea* Swainson, Zool. Illust., 3, pl. 139, 1823—Brazil (type in coll. of J. Leadbeater, probably lost).

*Sylvia venusta* Temminck, Nouv. Rec. Pl. Col., livr. 49, pl. 293, fig. 1, Aug., 1824—Brazil (type probably in Leiden Museum); d'Orbigny, Voy. Amér. Mérid., Ois., p. 218, 1836—part, Corrientes, Chiquitos and Valle Grande (Bolivia).

*Sylvicola venusta* Hartlaub, Syst. Ind. Azara, p. 8, 1847—Paraguay; Burmeister, Syst. Uebers. Th. Bras., 3, p. 116, 1856—Rio de Janeiro; idem, Journ. Orn., 8, p. 252, 1860—Paraná and Tucumán; idem, Reise La Plata St., 2, p. 473, 1861—same localities; Doering, Period. Zool. Arg., 1, p. 253, 1874—Barrancas, Corrientes.

*Sylvia venustula* (lapsu) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 20, 1837—Argentina and Bolivia.

*Sylvicola minuta* Swainson, Nat. Hist. Classif. Bds., 2, p. 245, 1837—based on *Sylvia plumbea* Swainson, Zool. Ill., 3, pl. 139.

*Compsothlypis pitiayumi* Cabanis, Mus. Hein., 1, p. 21, 1851—Brazil; idem, Journ. Orn., 22, p. 82, 1874—Cantagallo, Rio de Janeiro; Allen, Bull. Amer. Mus. N. H., 3, p. 344, 1891—Chapada and Abrilongo, Matto Grosso; Ihering, Cat. Faun. Braz., 1, p. 331, 1907—São Paulo (Rio Frio, Ypiranga, Rincão, Itararé), Bahia, and Rio de Janeiro (Petropolis); Bertoni, Faun. Parag., p. 60, 1914—Alto Paraná, Paraguay; Tremoleras, El Hornero, 2, p. 22, 1920—Uruguay (San José, Flores, Cerro Largo); Daguerre, l.c., 2, p. 270, 1922—Rosas, Buenos Aires; Serié and Smyth, l.c., 3, p. 52, 1923—Santa Elena, Entre Rios; Giacomelli, l.c., 3, p. 67, 1923—La Rioja; Pereyra, l.c., 3, p. 170, 1923—Zelaya and San Isidro, Buenos Aires; Wilson, l.c., 3, p. 360, 1926—Santa Fé; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 40, 1926—Ceará.

*Compsothlypis pitiayumi pitiayumi* Oberholser, Proc. U. S. Nat. Mus., 25, p. 143, 1902—Sapucay, Paraguay; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 368, 1910 (range in Argentina); idem, l.c., 23, p. 346, 1912—

Itapé and Paso Yuvay, Paraguay; Ménégau, Rev. Franç. d'Orn., 9, p. 85, 1917—Caceres, Matto Grosso; idem, l.c., 10, p. 333, 1918—Villa Lutetia, Misiones; Marelli, El Hornero, 1, p. 79, 1918—Curuzú Cuatiá, Corrientes; Dabbene, l.c., 1, p. 243, 1919—Isla Martín García, Buenos Aires; Hellmayr, Nov. Zool., 28, p. 243, 1921—part, No. 2, Chiquitos, Bolivia; Marelli, Mem. Min. Obr. Públ. for 1922-23, p. 655, 1924—Prov. Buenos Aires; Chapman, Auk, 42, p. 205, 1925 (crit., range); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 185, 1926—Rio Claro, Paraná; Wetmore, Bull. U. S. Nat. Mus., 133, p. 371, 1926—Argentina (Resistencia and Las Palmas, Chaco; Riacho Pilaga and Formosa, Formosa; Tapia, Tañi Viejo, and Serra San Xavier, Tucumán), Uruguay (San Vicente, Lazcano, Rio Negro), and Paraguay (near Puerto Pinasco); Friedmann, Bull. Mus. Comp. Zool., 68, p. 217, 1927—Santa Elena, Entre Rios; Holt, Bull. Amer. Mus. N. H., 57, p. 314, 1928—Serra do Itatiaya; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 260, 1929—Maranhão (Tranqueira) and Ceará (Serra Baturité); Naumburg, Bull. Amer. Mus. N. H., 60, p. 309, 1930—Utiaritz, near Salto Bello, Rio Papagaio, Matto Grosso; Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vogel, p. 309, 1930—Bolivia (San José and La Crecencia, Santa Cruz; Villa Montes and Fortín Esteros, Tarija).

*Parula pitiayumi* Baird, Rev. Amer. Bds., 1, p. 170, 1862—part, Paraná River and Brazil; Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Rio de Janeiro, São Paulo (Ypanema, Cimiterio, Itararé, Rio Paraná), and Paraná (Curitiba); Sclater and Salvin, Proc. Zool. Soc. Lond., 1869, p. 631—Conchitas, Buenos Aires; Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 445—Minas Geraes (Uberaba); Hamilton, Ibis, 1871, p. 302—São Paulo; Berlepsch, Journ. Orn., 21, p. 231, 1873—Blumenau, Santa Catharina; Durnford, Ibis, 1876, p. 158—near Buenos Aires; idem, Ibis, 1877, p. 168—same locality; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 593—part, Valle Grande (ex d'Orbigny); Salvin, Ibis, 1880, p. 352—Salta; White, Proc. Zool. Soc. Lond., 1882, p. 594—Sierras de Totoral (Catamarca) and San Javier (Misiones); Barrows, Bull. Nutt. Orn. Cl., 8, p. 87, 1883—Concepción, Entre Rios; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 114, 1885—Rio Grande do Sul (Taquara, Arroio Grande); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 259, 643, pl. 11, fig. 1, 1885—part, spec. b-f, o-s, Brazil, Conchitas, Paysandú, Rio Grande do Sul, Rio de Janeiro, and Bahia; Sclater and Hudson, Arg. Orn., 1, p. 20, 1888—Argentina south to Buenos Aires; Holland, Ibis, 1890, p. 425—Estancia Espartillar, Buenos Aires; Kerr, Ibis, 1892, p. 123—Fortín Page, lower Pilcomayo; Holland, Ibis, 1892, p. 195—Estancia Espartillar; Aplin, Ibis, 1894, p. 165—Rio Negro, Uruguay; Salvadori, Boll. Mus. Zool. Torino, 10, No. 208, p. 3, 1895—Colonia Risso, Paraguay; idem, l.c., 12, No. 292, p. 4, 1897—Bolivian Chaco (San Francisco, Caiza) and Jujuy (San Lorenzo); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Rio Grande do Sul (Mundo Novo, Pedras Brancas); idem, Rev. Mus. Paul., 3, p. 133, 1899—Ypiranga, São Paulo; idem, l.c., 4, p. 152, 1900—Cantagallo; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 173, 1902—Tucumán; Baer, Ornith., 12, p. 214, 1904—Santa Ana, Tucumán; Lillo, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tucumán; Reiser, Denks. Math.-Naturw.

Kl. Akad. Wiss. Wien, 76, p. 78, 1910—Bahia (Barroão and Fazenda de S. Antonio, Rio Preto) and Piauí (Riacho Fresco); Chubb, Ibis, 1910, p. 616—Sapucay, Paraguay; Grant, Ibis, 1911, p. 87—Buenos Aires (Los Yngleses, Ajó), Chaco (Riacho Ancho), and Paraguay (Arjerichí, Villa Oliva, Santa Rosa); Gibson, Ibis, 1918, p. 379—Cape San Antonio, Buenos Aires (winter visitor).

*Parula pitiayumi pitiayumi* Hartert and Venturi, Nov. Zool., 16, p. 166, 1909—Mocoví, Santa Fé (egg descr.).

*Sylvicola pitiayumi* Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Córdoba, 10, p. 398, 1890—Córdoba.

**Range.**—The tableland of Brazil from the interior of Maranhão, Piauí, and Ceará south to Matto Grosso and Rio Grande do Sul; eastern Bolivia west to the eastern base of the Andes in depts. of Cochabamba, Santa Cruz, Chuquisaca, and Tarija; Paraguay; Uruguay; northern Argentina south to La Rioja, Córdoba, and Buenos Aires.<sup>1</sup>

17: Brazil (Tranqueira, Maranhão, 1; Serra de Baturité, Ceará, 2; Macaco Secco, near Andaraí, Bahia, 2; Rio do Peixe, near Queimadas, Bahia, 1; São Marcello, Rio Preto, Bahia, 1; Therezopolis, Rio de Janeiro, 2; Baurú, São Paulo, 1; Joinville, Santa Catharina, 2); Uruguay (Rio Cebollati, Dept. Minas, 1); Argentina, Misiones (Rio Paraná, 3; Caragatatay, Rio Paraná, 1).

### Genus PEUCEDRAMUS Henshaw

*Peucedramus* Henshaw, Ann. Rep. Geog. Expl. West of 100th Merid., p. 156, 1875—type, by orig. desig., *Sylvia olivacea* Giraud.

*Peucedromus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 142, 1881 (emendation).

### \**Peucedramus olivaceus arizonae* Miller and Griscom.<sup>2</sup> ARIZONA OLIVE WARBLER.

*Peucedramus olivaceus arizonae* Miller and Griscom, Amer. Mus. Nov., 183, p. 10, 1925—Paradise, Chiricahua Mountains, Arizona (type in coll. of J. Dwight, now in the American Museum of Natural History, New York).

<sup>1</sup> Birds from eastern Bolivia (Santa Cruz) and the adjoining section of Argentina (Tucumán) I am unable to separate from a Brazilian series.

**Additional material examined.**—Brazil: Riacho Fresco, Piauí, 1; Rio Preto, Bahia, 2; Bahia, 3; Rio Doce, Espírito Santo, 1; Rio de Janeiro, 3; Ypanema, São Paulo, 7; Rio Grande do Sul, 6.—Paraguay: Sapucay, 2.—Bolivia: Santa Cruz, 5; San José, Santa Cruz, 1; La Crecencia, Santa Cruz, 2; Villa Montes, Tarija, 3; Fortín Esteros, Tarija, 2.—Argentina: Tucumán, 2.

<sup>2</sup> *Peucedramus olivaceus arizonae* Miller and Griscom: Very similar to *P. o. olivaceus*, but grayer above with very little, if any, olivaceous tinge; yellowish olive-green nuchal collar less pronounced; head and throat in adult males somewhat duller ochraceous; under parts paler gray, more white in the middle and less olivaceous on the flanks.



*Dendroica olivacea* (not *Sylvia olivacea* Giraud) Henshaw, Amer. Sportsm., 5, p. 328, 1875—Mount Graham, Arizona; Mearns, Auk, 7, p. 261, 1890—Mogollon Mountains, Arizona; Price, Auk, 12, p. 17, 1895—Huachuca, Chiricahua, Graham, and White Mountains, Arizona (nest and eggs descr.).

*Peucedramus olivaceus* Henshaw, Ann. Rep. Geog. Expl. West of 100th Merid., p. 202, 1875—Mount Graham, Arizona (habits); Brewster, Bull. Nutt. Orn. Cl., 7, p. 135, 1882—Chiricahua Mountains, Arizona; Scott, Auk, 2, p. 352, 1885—Santa Catalina Mountains, Arizona; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 337, 651, 1885—part, spec. l-n, Ciudad Durango, and hab., Arizona, "Texas," and New Mexico; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 494, 1902—part, Arizona and Chihuahua; Phillips, Auk, 28, p. 84, 1911—Tamaulipas (Montelunga, Galindo, Yerba Buena, Realito).

*Peucedromus olivaceus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 142, 1881—part, Arizona.

**Range.**—Transition (Temperate) zone of southern Arizona, southern New Mexico, and southward to Chihuahua, Durango, and Tamaulipas, Mexico.

18: Arizona (Chiricahua Mountains, 2; Paradise, 1; Huachuca Mountains, 1); Mexico, Chihuahua (Pacheco, 1; Babilcora, 13).

### ***Peucedramus olivaceus olivaceus* (Giraud). OLIVE WARBLER.**

*Sylvia olivacea* Giraud, Descr. Sixteen New N. Amer. Bds., [p. 16, pl. 7, fig. 2], 1841—"Texas," errore; Las Vegas, Vera Cruz, Mexico, has been suggested (by Miller and Griscom) as type locality (type in U. S. National Museum); Sclater, Proc. Zool. Soc. Lond., 23, p. 66, 1855 (crit.).

*Sylvia taeniata* Du Bus, Bull. Acad. Roy. Sci., Lettr., etc., Belg., 14, (2), p. 104, 1847—"le Mexique"<sup>1</sup> (type in Brussels Museum).

*Sylvicola olivacea* Cassin, Illust. Bds. Calif., Tex., etc., p. 283, pl. 48, 1856—"Texas" and Mexico.

*Rhimamphus olivaceus* Sclater, Proc. Zool. Soc. Lond., 24, p. 291, 1856—near Cordoba, Vera Cruz.

*Dendroica olivacea* Sclater, Proc. Zool. Soc. Lond., 26, p. 298, 1858—La Parada, Oaxaca; Baird, Rev. Amer. Bds., 1, p. 205, 1865—part, Mexico (Popocatepetl, Orizaba); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—alpine forests of Vera Cruz; Cox, Auk, 12, p. 358, 1895—Mount Orizaba; Chapman, Bull. Amer. Mus. N. H., 10, p. 40, 1898—Las Vegas, Vera Cruz (habits).

*Dendroica olivacea* Sclater, Proc. Zool. Soc. Lond., 27, p. 363, 1859—Jalapa, Vera Cruz; idem, Cat. Coll. Amer. Bds., p. 31, 1862—Popocatepetl and Jalapa, Mexico; Sundevall, Ofvers. Vetensk.-Akad. Handl., 26, p. 610, 1869—Mexico (monog.).

*Peucedromus olivaceus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 142, 1881—part, Mexico (near Mexico City, Popocatepetl, Jalapa, La Parada, etc.).

<sup>1</sup> Probably State of Vera Cruz, where some of the other new Mexican birds described by Du Bus came from.

*Peucedramus olivaceus* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 337, 651, 1885—part, spec. a-e, h, k, Mexico (Popocatepetl, Jalapa, La Parada, Oaxaca, and near Mexico City); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 494, 1902—part, southeastern Mexico.

*Peucedramus olivaceus olivaceus* Miller and Griscom, Amer. Mus. Nov., 183, p. 9, 1925—mountains of Vera Cruz (crit.).

*Peucedramus olivaceus jaliscensis* Miller and Griscom, Amer. Mus. Nov., 183, p. 9, 1925—Zapotlan, Jalisco (type in the American Museum of Natural History, New York).

*Range*.—Temperate zone of southern Mexico from Jalisco to Vera Cruz, Mexico, Puebla, and Oaxaca.<sup>1</sup>

### ***Peucedramus olivaceus aurantiacus* Ridgway.<sup>2</sup> GUATEMALAN OLIVE WARBLER.**

*Peucedramus olivaceus aurantiacus* Ridgway, Proc. U. S. Nat. Mus., 18, p. 441, 1896—Chilasco, Vera Paz, Guatemala (type in U. S. National Museum); Miller and Griscom, Amer. Mus. Nov., 183, p. 10, 1925—Guatemala (crit.); Griscom, Bull. Amer. Mus. N. H., 64, p. 327, 1932—Guatemala (Chichicastenango, Momostenango, San Mateo, Tecpam).

*Dendroica olivacea* (not *Sylvia olivacea* Giraud) Baird, Rev. Amer. Bds., 1, p. 205, 1865—part, "Choctum," Guatemala.

*Dendroica olivacea* Salvin, Ibis, 1866, p. 191—Volcan de Fuego and Chilasco, Vera Paz, Guatemala.

*Peucedromus olivaceus* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 142, 1881—part, Guatemala (Volcan de Fuego, Volcan de Agua, Chilasco).

*Peucedramus olivaceus* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 337, 651, 1885—part, spec. f, g, o-s, Guatemala (Volcan de Fuego, Volcan de Agua); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 494, 1902—part, Guatemala and Chiapas.

*Range*.—Temperate zone (pine forests) of Guatemala and extreme southeastern Mexico (State of Chiapas).

<sup>1</sup> Further subdivision of this form appears to me unwarranted. Ten adult males from Cofre de Perote, Vera Cruz, measure on the wing from 74 to 78, against 72 to 76 in four from Jalisco, and as no difference whatever exists in coloration I consider the slightly smaller size of the western birds too insignificant to maintain the race *jaliscensis*.

<sup>2</sup> *Peucedramus olivaceus aurantiacus* Ridgway: According to Miller and Griscom, similar to *P. o. olivaceus* in rich tawny-ochraceous head and throat, but clearer gray above and below, and slightly smaller.

Four Vera Paz skins I am hardly able to separate from typical *olivaceus*, as represented by twelve specimens from Cofre de Perote, Vera Cruz, by very slightly paler gray coloration of the body plumage. In size they resemble the smaller individuals from Mexico. A single example from Chiapas seems to be similar. I must confess I am a little doubtful about the validity of the race *aurantiacus*; yet in the absence of recently collected Guatemalan material I prefer to follow Miller and Griscom in admitting it.

**Peucedramus olivaceus micrus** Miller and Griscom.<sup>1</sup> NICARAGUAN OLIVE WARBLER.

*Peucedramus olivaceus micrus* Miller and Griscom, Amer. Mus. Nov., 183, p. 10, 1925—San Rafael del Norte, Nicaragua (type in the American Museum of Natural History, New York).

*Peucedramus olivaceus* (not *Sylvia olivacea* Giraud) Salvin and Godman, Ibis, 1892, p. 325—Matagalpa, Nicaragua.

Range.—Temperate zone of northern Nicaragua.

Genus **DENDROICA** G. R. Gray<sup>2</sup>

*Dendroica* G. R. Gray, Appendix List Gen. Bds., p. 8, 1842—type, by orig. desig., *Motacilla coronata* Linnaeus.

*Dendroeca* Agassiz, Nomencl. Zool. Ind. Univ., p. 119, 1846—emendation.

*Perissoglossa* Baird, Rev. Amer. Bds., 1, p. 180, 1865—type, by orig. desig., *Motacilla tigrina* Gmelin.

*Chrysocantor* Maynard, Warblers New Eng., Part 3, p. 58, 1901—type, by orig. desig., *Motacilla aestiva* Gmelin.

*Neodendroica* Maynard, l.c., Part 4, p. 69, 1901—type, by orig. desig., *Motacilla dominica* Linnaeus.

*Caeruleocantor* Maynard, Directory Bds. East. N. A., Part 9, p. 236, 1907—type, by orig. desig., *Motacilla caerulescens* Gmelin.

*Maculocantor* Maynard, l.c., Part 9, p. 238, 1907—type, by orig. desig., *Motacilla maculosa* Gmelin.

*Azuria* Maynard, l.c., Part 9, p. 238, 1907—type, by orig. desig., *Sylvia rara* Wilson=*Sylvia cerulea* Wilson.

*Sylviocantor* Maynard, l.c., Part 9, p. 239, 1907—type, by orig. desig., *Motacilla pennsylvanica* Linnaeus.

*Lineocantor* Maynard, l.c., Part 9, p. 240, 1907—type, by subs. desig. (Richmond, Proc. U. S. Nat. Mus., 53, p. 599, 1917), *Muscicapa striata* Forster.

*Piceacantor* Maynard, l.c., Part 9, p. 241, 1907—type, by orig. desig., *Motacilla blackburniae* Gmelin=*Motacilla fusca* Müller.

*Vireocantor* Maynard, l.c., Part 9, p. 242, 1907—type, by orig. desig., *Motacilla virens* Gmelin.

*Agreocantor* Maynard, l.c., Part 9, p. 243, 1907—type, by orig. desig., *Sylvicola kirtlandi* Baird.

*Pinacantor* Maynard, l.c., Part 9, p. 244, 1907—type, by orig. desig., *Sylvia vigorsii* Audubon.

<sup>1</sup> *Peucedramus olivaceus micrus* Miller and Griscom: Nearest to *P. o. aurantiacus*, but even smaller; crown more golden tawny, paler than throat; nuchal collar more yellowish; primaries edged with white instead of with olive green; under parts slightly paler (Miller and Griscom, l.c.).

<sup>2</sup> *Rimamphus* Rafinesque (Amer. Monthly Mag., 4, p. 39, Nov., 1818; Journ. Phys. Chimie Hist. Nat., 88, p. 418, 1819), with *R. citrinus* Raf. as type, is evidently a fictitious bird, as has been pointed out by Baird (Rep. Expl. Surv. R. R. Pac., 9, p. 264, 1858).

*Terracantor* Maynard, l.c., Part 9, p. 245, 1907—type, by orig. desig., *Motacilla palmarum* Gmelin.

*Fruticantor* Maynard, l.c., Part 9, p. 246, 1907—type, by orig. desig., *Sylvia discolor* Vieillot.

**\**Dendroica aestiva aestiva* (Gmelin). EASTERN YELLOW WARBLER.**

*Motacilla canadensis* (not of Linnaeus, 1766) Boddaert, Tabl. Pl. Enl., p. 4, 1783—based on "Figuier de Canada" Daubenton, Pl. Enl., pl. 58, fig. 2.

*Motacilla aestiva* Gmelin, Syst. Nat., 1, (2), p. 996, 1789—based on "Figuier de Canada" of Brisson (Orn., 3, p. 492, pl. 26, fig. 3) and Daubenton (Pl. Enl., pl. 58, fig. 2), "Figuier tacheté" of Buffon, and "Figuier de la Caroline" of Daubenton (Pl. Enl., pl. 58, fig. 1); Canada accepted as type locality.

*Sylvia carolinensis* Latham, Ind. Orn., 2, p. 551, 1790—based mainly on "Figuier de la Caroline" Daubenton, Pl. Enl., pl. 58, fig. 1 (=young).

*Sylvia flava* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 31, pl. 87, "1807" [=1808?]<sup>1</sup>—on migration in the United States (type in coll. of P. L. Vieillot, doubtless lost).

*Sylvia citrinella* Wilson, Amer. Orn., 2, p. 111, pl. 15, fig. 6, 1811—Pennsylvania (type in Peale's Museum, probably lost).

*Sylvia childrenii* Audubon, Orn. Biog., 1, p. 180, 1831—near Jackson, Louisiana (location of type not stated, doubtless lost).

*Sylvia rathbonia* Audubon, l.c., 1, p. 333, 1831—no locality stated, probably one of the Gulf states, Mississippi, Louisiana, or Tennessee (location of type unknown).

*Rhimamphus chryseolus* Bonaparte, Bull. Soc. Linn. Normandie, 2, p. 32, 1857—based on "*Sylvicola aestiva* ex Am. m. auct."<sup>1</sup> Cayenne.

*Dendroica aestiva morcomi* Coale, Bull. Ridgway Orn. Cl., No. 2, p. 82, April, 1887—Fort Bridger, Wyoming (type in U. S. National Museum); van Rossem, Trans. San Diego Soc. N. H., 6, p. 283, 1931—Saric, Guirocoba, and San José de Guaymas, Sonora (crit.).

*Dendroica aestiva mercedes* Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 163, 1927—La Merced, Chanchamayo, Peru (type in Warsaw Museum).<sup>2</sup>

*Dendroica aestiva* Pelzeln, Orn. Bras., 2, p. 71, 1868—Forte do São Joaquim, Rio Takutú, Brazil; Sharpe, Cat. Bds. Brit. Mus., 10, p. 273, 1885 (monog.); Bidwell, Bull. Brit. Orn. Cl., 15, p. 46, 1905—near Axwell Park, Durham, England (May, 1904); Snethlage, Bol. Mus. Goeldi, 8, p. 481, 1914—Rio Purús and Marajó (Chaves), Brazil; Chubb, Bds. Brit. Guiana, 2, p. 404, 1921—numerous localities.

<sup>1</sup> As it stands, Bonaparte's is a nomen nudum, since I have not succeeded in finding an earlier South American record of "*Sylvicola aestiva*" with a description.

<sup>2</sup> We have examined the type, taken by J. Kalinowski on February 26, 1891. It is a brightly colored male of *D. a. aestiva*, which can be matched by numerous individuals from various parts of the eastern United States, one from Georgia being very similar. The Yellow Warbler is a well-known winter visitor to South America, and the supposition of a resident Peruvian race seems altogether unfounded.

*Dendroica aestiva* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—La Merced, Peru; Berlepsch and Hartert, Nov. Zool., 9, p. 9, 1902—Venezuela (Altagracia, Orinoco; Suapure, La Pricion; and La Union, Caura River); Hellmayr, l.c., 13, p. 6, 1906—Laventille and Chaguaramas, Trinidad; Berlepsch, l.c., 15, p. 107, 1908—Cayenne, Roche-Marie, and Approuague, French Guiana.

*Dendroica aestiva aestiva* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 508, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 813, 1910—Costa Rica (visitant); Chapman, Bull. Amer. Mus. N. H., 36, p. 545, 1917—Colombia (Barbacoas, San José, Rio Frio, Calamar, Boca de Chimi, Honda, Chicoral, San Agustin, Bogotá); Todd and Carriker, Ann. Carnegie Mus., 14, p. 453, 1922—Bonda, Mamatoco, Gaira, Punto Caiman, Rio Hacha, and Dibulla, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 593, 1926—Ecuador (Esmeraldas, Chone, Macas region); Griscom, l.c., 64, p. 327, 1932—Guatemala.

*Dendroica marcomi* Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 8, 1899—La Concepción, Chota Valley, Ecuador.

*Range*.—North America east of Alaska and the Pacific slope from tree-limit south to Nevada, northern New Mexico, southern Missouri, and northern Alabama, Georgia, and South Carolina;<sup>1</sup> winters from Yucatan to Ecuador, Peru, Colombia, Venezuela, Trinidad, Guiana, and northern Brazil (Forte do São Joaquim, Rio Takutú; Marajó Island; Monte Verde, Rio Purús); accidental in England (one record from near Axwell Park, Durham, May, 1904).<sup>2</sup>

149: Saskatchewan (Quill Lake, 1); Alberta (Medicine Hat, 1); British Columbia (Victoria, 3; Okanagan, 4); Massachusetts (Cliftondale, 2; Dedham, 1; Longwood, 3); Connecticut (East Hartford, 17); New York (Cayuga Lake, 2; Shelter Island, 5); New Jersey (Englewood, 2); North Carolina (Raleigh, 2); Kentucky (Bardstown, 1); Illinois (Chicago, 13; Deerfield, 1; Englewood, 2; Fox Lake, 3; Hegewisch, 1; Joliet, 1; Lake Forest, 6; Ravinia, 2; Willow Springs, 1; unspecified, 1); Wisconsin (Beaver Dam, 11); Iowa (Cedar Rapids, 2); Colorado (Colorado Springs, 1; Hot Sulphur Springs, 1; Paradox, 1; Chief Mountain, 1; unspecified, 1); Florida (Enterprise, 1; Key

<sup>1</sup> Van Rossem considers *D. a. morcomi*, of the Rocky Mountains, to be distinguishable by slightly larger size and duller (less yellowish) green coloration from *D. a. aestiva*, and by larger size and (in the males) heavier breast-streaking from *D. a. brewsteri*, and would assign to it breeding birds from the Great Basin slope of the Sierra Nevada and Cascade ranges. Extreme western localities for *morcomi* as represented in his series are Inyo and Mono counties, the Truckee River in Nevada County, California, and Benton County, Washington. Although the latest edition of the A. O. U. Check List does not recognize *D. a. morcomi*, the matter evidently merits further consideration.

<sup>2</sup> No authentic record exists from either the Bahamas or the West Indies. The supposed occurrence in Grenada is clearly due to misidentification. Cf. Clark, Auk, 22, pp. 212-214, 1905.

West, 1); Texas (Fort Worth, 1); Arizona (Apache, 1; Calabasas, 13; Tucson, 2); Yucatan (unspecified, 1); Guatemala (Laguna, 1; Lake Amatitlan, 1; Los Amates, Izabel, 2; Mazatenango, 3; Patulul, Solola, 2; San José, Escuintla, 1); Honduras (Ruatan Island, Bay of Honduras, 2); Nicaragua (San Emilio Lake, 1); Costa Rica (Las Cañas, 1; Limón, 1); Panama (Colón, 1); Colombia (ten miles north of Cucuta, 1; "Bogotá," 2); Venezuela (Caracas, 8; Encontrados, Zulia, 4; Maracay, Aragua, 2); British Guiana, 2; Brazil (Bôa Vista, Rio Branco, 1).

***Dendroica aestiva amnicola* Batchelder.<sup>1</sup> NEWFOUNDLAND YELLOW WARBLER.**

*Dendroica aestiva amnicola* Batchelder, Proc. New Engl. Zool. Cl., 6, p. 82, 1918—Curslet, Newfoundland (type in coll. of C. F. Batchelder); Noble, Bull. Mus. Comp. Zool., 62, p. 560, 1919—Deer Lake, Nicholasville, and Lewis Hills, Newfoundland (crit.); Bishop, Auk, 38, p. 588, 1921—Connecticut (West Haven and Outer Island, Stoney Creek) and Magdalen Islands (breeding); Griscom, Bull. Amer. Mus. N. H., 64, p. 328, 1932—Finca Chama, Guatemala (May 4).

*Dendroica aestiva* subsp. Griscom, Ibis, 1926, p. 679—western coast of Newfoundland.

**Range.**—Newfoundland and Magdalen Islands; winter home unknown, on migration in Connecticut (West Haven and Outer Island, Sept. 10–14) and Guatemala (one record from Finca Chama, May 4).

**\**Dendroica aestiva rubiginosa* (Pallas). ALASKA YELLOW WARBLER.**

*Motacilla rubiginosa* Pallas, Zoogr. Rosso-Asiat., 1, p. 496, "1811"=[1826?]—"in insula Kadiak"—Kodiak Island, Alaska (location of type not stated).

*Dendroica aestiva rubiginosa* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 514, 1902 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 21, p. 367, 1905—Juan Lisiarraga Mountains and Escuinapa, Sinaloa (crit.); Griscom and Crosby, Auk, 43, p. 29, 1926—Brownsville, Texas (May 8, Sept. 16, Dec. 14, Jan. 5); Grinnell, Univ. Calif. Pub. Zool., 32, p. 199, 1928—Lower California (spring transient); Bangs and Peters, Bull. Mus.

<sup>1</sup> *Dendroica aestiva amnicola* Batchelder: Similar to *D. a. aestiva*, but stated to differ in the male sex by darker green, less yellowish—between warbler green and sulphine yellow—back; more restricted and duller yellow of the forehead; narrower as well as duller, citron yellow rather than strontian yellow, edges to the remiges; and on average less richly colored under parts with darker chestnut streaks; female duskier, less yellowish above. (Batchelder, l.c.)

This race, which is regarded by Noble as a well-marked one, seems to be not unlike *D. a. rubiginosa*, but distinguished by the yellow forehead contrasting with the green of the back. Mr. J. L. Peters (in litt.) writes, however, that it is not always readily separable from the latter, though obviously distinct from typical *aestiva*. While we have no definite information as to its winter home, it should be noted that Griscom refers a transient taken on May 4 at Finca Chama, Guatemala, to *D. a. amnicola*.

Comp. Zool., 68, p. 400, 1928—Tapanatepec, Oaxaca; Peters, l.c., 71, p. 333, 1931—Almirante, Panama; van Rossem, Trans. San Diego Soc. N. H., 6, p. 282, 1931—Guaymas and San José de Guaymas, Sonora (spring transient); Griscom, Bull. Amer. Mus. N. H., 64, p. 328, 1932—Guatemala (Sacapulas, Finca Carolina, Finca Cipres, Progreso).

*Range*.—Northwestern North America from Alaska south to Vancouver Island; migrating through California, Utah, New Mexico, Texas, and Lower California, and wintering from Mexico to western Panama (Almirante).

7: Alaska (Circle, 1); British Columbia (Chilliwack, 1; Sumas, 1); Utah (unspecified, 1); California (Dulzura, 1; Santa Isabel, 1); Nicaragua (San Gerónimo, 1).

**\**Dendroica aestiva brewsteri* Grinnell.<sup>1</sup> CALIFORNIA YELLOW WARBLER.**

*Dendroica aestiva brewsteri* Grinnell, Condor, 5, p. 72, 1903—Palo Alto, California (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 300, 1932); Huey, Auk, 43, p. 359, 1926—northwestern Lower California south to Rosario; Grinnell, Univ. Calif. Pub. Zool., 32, p. 199, 1928—Pacific slope of Lower California north of 30° latitude; van Rossem, Trans. San Diego Soc. N. H., 6, p. 283, 1931—Guirocoba, Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 328, 1932—Guatemala (Finca Sepacuite, Sacapulas, Finca Carolina).

*Range*.—Breeds on the Pacific coast strip from western Washington south through Oregon and California, west of the Great Basin and southeastern deserts to about latitude 30° in Lower California; migrates through eastern California, Arizona, and Lower California; winters sparsely in the Cape district of Lower California and south to Guatemala and northern Nicaragua.

11: Oregon (near Salem, 1; Tillamook, 1); California (Los Gatos, 2; Miller, Marin County, 1; North Pomona, 1; Palm Springs, 2; Santa Cruz, 3).

**\**Dendroica aestiva sonorana* Brewster. SONORA YELLOW WARBLER.**

*Dendroica aestiva sonorana* Brewster, Auk, 5, p. 137, 1888—Oposura, Sonora, Mexico (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 357, 1930); Jouy, Proc. U. S. Nat. Mus., 16, p. 777, 1893—Cuernavaca, Morelos; Allen, Bull. Amer. Mus. N. H., 5, p. 40, 1893—Bisbee, Arizona, and San Diego, Chihuahua; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2,

<sup>1</sup> *Dendroica aestiva brewsteri* Grinnell: Resembles *D. a. aestiva*, but differs in smaller size, duller (less yellowish) coloration, and, in the male sex, narrower chestnut streaking on under parts. From *D. a. rubiginosa* it may be distinguished by much smaller size and yellower coloration, from *D. a. sonorana* by smaller size and much darker coloration.

p. 512, 1902 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 180, 1906—Rio Sestín, Durango; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 128, 1907—El Rancho and San José, Guatemala; Rendahl, Ark. Zool., 12, No. 8, p. 36, 1919—San Juan del Norte, Nicaragua; Griscom and Crosby, Auk, 43, p. 29, 1926—Brownsville, Texas; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 42, 1927—Labrados, Sinaloa; Grinnell, Univ. Calif. Pub. Zool., 32, p. 199, 1928—Colorado desert region of Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 283, 1931—Sarıc and Tésia, Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 328, 1932—Ocos and San José, Guatemala.

*Range*.—Breeds in the Lower Austral zone of southeastern California, northeastern Lower California, Sonora, Chihuahua, southern Arizona, New Mexico, and central-western Texas; winters from Mexico south to western Panama (fide Griscom).

32: Colorado (Denver, 2; Fort Lyon, 6); Arizona (Fort Grant, 5); California (Nicasio, 4); Texas (Boille, 1; Ingram, Kerr County, 1); Mexico (Iguala, Guerrero, 5; Jalisco, 2; Teapa, Tabasco, 2; unspecified, 2); Guatemala (El Rancho, Zacapa, 1; San José, Escuintla, 1).

***Dendroica aestiva inedita* Phillips.<sup>1</sup> TAMAULIPAS YELLOW WARBLER.**

*Dendroica aestiva ineditus* Phillips, Auk, 28, p. 85, 1911—Matamoros, Tamaulipas, Mexico (type in Museum of Comparative Zoology, Cambridge, Mass.); Griscom, Bull. Amer. Mus. N. H., 64, p. 329, 1932—Ocos, Guatemala (Oct. 22).

*Range*.—Eastern Mexico, in State of Tamaulipas (Matamoros); on migration in western Guatemala (Ocos, Oct. 22).

***Dendroica aestiva dugesi* Coale. DUGÉS'S YELLOW WARBLER.**

*Dendroica dugesi* Coale, Bull. Ridgway Orn. Cl., No. 2, p. 83, April, 1887—Moro León, Guanajuato, Mexico (type in U. S. National Museum).

*Dendroica aestiva dugesi* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 513, 1902—central Mexico (monog.).

*Range*.—Central Mexico, in states of Guanajuato (Moro León), Tlaxcala (Apixaco), Michoacan (Patzcuaro), and Morelos (Cuernavaca).

<sup>1</sup> *Dendroica aestiva inedita* Phillips: "Most nearly like *D. a. dugesi*, but slightly smaller, and the female very different in color, being bright yellow below, and dull greenish yellow above instead of grayish; also somewhat similar to *D. a. sonorana* in general coloration of the male, but much larger, and the female more brightly colored (yellow below and more greenish above). Wing, 62–65, (female) 59–61; tail, 43–47, (female) 42–44; bill, 10–11." (Phillips, l.c.).

This form, described from migrant individuals, probably breeds in the mountains of western Tamaulipas. A single specimen has been recorded by Griscom from western Guatemala (Ocos).



**\*Dendroica petechia<sup>1</sup> eoa (Gosse). JAMAICAN GOLDEN WARBLER.**

*Sylvicola eoa* Gosse, Bds. Jamaica, p. 158, 1847—Crab Pond, Jamaica (types in British Museum; cf. Peters, Proc. Biol. Soc. Wash., 40, p. 33, 1927).<sup>2</sup>

*Dendroica eoa* Baird, Rev. Amer. Bds., 1, p. 195, 1865—Jamaica (ex Gosse); Cory, Auk, 3, p. 32, 1886—Jamaica (ex Gosse); idem, Bds. W. Ind., p. 46, 1889—Jamaica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 531, 1902—Jamaica (ex Gosse).

*Dendroeca eoa* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 609, 1870—Jamaica (ex Gosse); Sharpe, Cat. Bds. Brit. Mus., 10, p. 266, 1885—Jamaica (note on types).

*Dendroica petechia eoa* Peters, Proc. Biol. Soc. Wash., 40, p. 32, 1927—Jamaica and Cayman Islands (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 331, 1930 (range, habitat); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 20, 1931—Grand Cayman.

*Dendroeca petechia* (not *Motacilla petechia* Linnaeus) Sclater, Proc. Zool. Soc. Lond., 1861, p. 71—Jamaica (crit.); idem, Cat. Coll. Amer. Bds., p. 32, 1862—part, spec. b, Jamaica; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 277, 644, 1885—part, Jamaica; Nicoll, Ibis, 1904, p. 577—Kingston, Jamaica.

*Dendroica petechia* March, Proc. Acad. Nat. Sci. Phila., 1863, p. 292—Jamaica (nest, eggs, habits); Baird, Rev. Amer. Bds., 1, p. 199, 1865—Jamaica (monog.); Cory, Auk, 3, p. 29, 1886—part, Jamaica; idem, Bds. W. Ind., p. 43, 1889—part, Jamaica; Scott, Auk, 10, p. 340, 1893—Buff Bay, Jamaica; Field, l.c., 11, p. 127, 1894—Jamaica (habits).

*Dendroeca petechia e) jamaicensis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 608, 1870—based on *D. petechia* Baird, ex Jamaica.

*Dendroica petechia gundlachi* (not of Baird) Cory, Auk, 3, p. 501, 1886—Grand Cayman.

*Dendroica auricapilla* Ridgway, Proc. U. S. Nat. Mus., 10, p. 572, 1888—Grand Cayman (type in U. S. National Museum).

*Dendroica aurocapilla* Cory, Auk, 6, p. 31, 1889—Little Cayman; idem, Bds. W. Ind., p. 287, 1889—Grand Cayman.

*Dendroeca auricapilla* Nicoll, Ibis, 1904, p. 579—Grand Cayman.

*Dendroica petechia auricapilla* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 517, 1902—Grand Cayman (monog.).

*Dendroeca petechia (auricapilla?)* Lowe, Ibis, 1909, p. 344—Grand Cayman.

*Dendroeca petechia auricapilla* Lowe, Ibis, 1911, p. 155—Grand and Little Cayman; English, Ibis, 1916, p. 29—Grand Cayman (nest descr.).

<sup>1</sup> The Golden Warblers (*Dendroica petechia*), though closely related to *D. aestiva*, differ nevertheless by more rounded wing, shorter wing tip, and proportionately longer tail, and may conveniently be regarded as constituting a separate specific entity. Yet at some future date it might be found to be more logical to include them in the same "formenkreis," as the derivation of the migratory and sedentary species from a common ancestral stock seems hardly in doubt.

<sup>2</sup> Gosse's plate published two years later (Illust. Bds. Jamaica, pl. 34, 1849) is more or less imaginary, and does not agree with either his description or his types (cf. Peters, l.c.).

*Dendroica petechia petechia* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 515, 1902—part, Jamaica (monog.); Bangs, Bull. Mus. Comp. Zool., 60, p. 315, 1916—Grand Cayman, Little Cayman, and Cayman Brac (crit.); Danforth, Auk, 45, p. 489, 1928—Jamaica.

*Range*.—Jamaica and the Cayman Islands (Grand Cayman, Little Cayman, Cayman Brac), Greater Antilles.<sup>1</sup>

88: Grand Cayman, 83; Little Cayman, 1; Cayman Brac, 4.

### *Dendroica petechia gundlachi* Baird.<sup>2</sup> CUBAN GOLDEN WARBLER.

*Dendroica gundlachi* Baird, Rev. Amer. Bds., 1, p. 197, 1865—Cuba (type in U. S. National Museum); Gundlach, Journ. Orn., 20, p. 414, 1872—Cuba (nest and eggs; crit.).

*Sylvia aestiva* (not *Motacilla aestiva* Gmelin) Lembeye, Aves Isl. Cuba, p. 31, 1850 (not pl. 6, fig. 8)—Cuba.

*Rhimamphus aestivus* Cabanis, Journ. Orn., 3, p. 472, 1855—Cuba; Gundlach, l.c., 9, p. 407, 1861—Cuba.

*Dendroica albicollis* (not *Motacilla albicollis* Gmelin) Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 192—part, Cuba; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 264, 1860—Cuba (crit.); Albrecht, Journ. Orn., 9, p. 205, 1861—Cuba.

*Dendroica petechia* (not *Motacilla petechia* Linnaeus) Chapman, Bull. Amer. Mus. N. H., 4, p. 310, 1892—Casilda, southern Cuba (crit.).

*Dendroica gundlachi* Gundlach, Rep. Fis. Nat. Cuba, 1, p. 234, 1865—Cuba; Sharpe, Cat. Bds. Brit. Mus., 10, p. 278, 1885—part, Cuba.

*Dendroica petechia* d) *cubana* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 608, 1870—new name for *Dendroica gundlachi* Baird.

*Dendroica petechia*  $\beta$  *gundlachi* Ridgway, Proc. U. S. Nat. Mus., 8, p. 349, 1885—part, Cuba.

*Dendroica petechia gundlachi* Cory, Auk, 3, p. 30, 1886—part, Cuba; idem, Bds. W. Ind., p. 44, 1889—part, Cuba; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 520, 1902—Cuba (monog.); Todd, Ann. Carnegie Mus., 10, p. 269, 1916—Isle of Pines (Los Indios, Bird Island, Majagua River, Siguanee) (habits); Barbour, Mem. Nutt. Orn. Cl., 6, p. 114, 1923—Cuba and Isle of Pines; Peters, Proc. Biol. Soc. Wash., 40, p. 34, 1927—Cuba and Isle of Pines (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 331, 1930—Cuba, Isle of Pines, and outlying cays; Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 34, 1932—Cayo Grande de Mora, Cuba.

*Range*.—Cuba, Isle of Pines and outlying cays, Greater Antilles.

<sup>1</sup> I fully concur with Bangs and Peters that the Golden Warblers from the Caymans are inseparable from those of Jamaica.

<sup>2</sup> *Dendroica petechia gundlachi* Baird: Very similar to *D. p. eoa*, but duller and greener above; crown patch less extensive and duller, less orange; under surface slightly paler; female also somewhat duller.

Seven specimens from Cuba examined.

***Dendroica petechia albicollis* (Gmelin).<sup>1</sup> HISPANIOLAN GOLDEN WARBLER.**

*Motacilla albicollis* Gmelin, Syst. Nat., 1, (2), p. 983, 1789—based on "Le Figuier de S. Domingue" Brisson, Orn., 3, p. 494, pl. 26, fig. 5; Santo Domingo (descr. young male).

*Motacilla chloroleuca* Gmelin, Syst. Nat., 1, (2), p. 984, 1789—based on "Le petit Figuier de S. Domingue" Brisson, Orn., 3, p. 496, pl. 26, fig. 2; Santo Domingo (descr. female).

*Dendroica albicollis* Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 192—part, Santo Domingo (ex Brisson).

*Dendroica petechia albicollis* Bartsch, Proc. Biol. Soc. Wash., 30, p. 132, 1917—Port-au-Prince, Haiti (crit.); Peters, Bull. Mus. Comp. Zool., 61, p. 421, 1917—Monte Cristi, Dominican Republic (crit.); idem, Proc. Biol. Soc. Wash., 40, p. 34, 1927—Haiti (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 512, 1928—part, Port-au-Prince, Sulphur Springs, Caracol, Fort Liberté, and Tortuga (Tortue) Island; idem, l.c., 82, p. 331, 1930—Hispaniola and La Tortue (habits); Danforth, Auk, 46, p. 372, 1929—part, Monte Cristi, Port-au-Prince, and Les Salines, Hispaniola; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 369, 1931—Hispaniola (monog.); Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 34, 1932—Grande Cayemite, Petite Cayemite, and Bug Island.

*Dendroica petechia petechia* (not *Motacilla petechia* Linnaeus) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 515, 1902—part, Haiti.

*Range*.—Island of Hispaniola, including La Tortue and other islands off the coast, Greater Antilles.

***Dendroica petechia solaris* Wetmore.<sup>2</sup> GONAVE GOLDEN WARBLER.**

*Dendroica petechia solaris* Wetmore, Smiths. Misc. Coll., 81, No. 13, p. 1, 1929—Étroites, Gonave Island (type in U. S. National Museum); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 331, 1930—La Gonave; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 371, 1931—Gonave (monog.); Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 34, 1932—Petite Gonave Island.

*Dendroica petechia albicollis* (not *Motacilla albicollis* Gmelin) Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 512, 1928—part, Gonave; Danforth, Auk, 46, p. 372, 1929—part, Gonave.

<sup>1</sup> *Dendroica petechia albicollis* (Gmelin): Similar to *D. p. eoa*, but smaller in all proportions, the bill shorter and slenderer than in the other forms from the Greater Antilles and the Bahamas; male with upper parts and sides of head brighter golden yellow; female distinguishable from *D. p. eoa* by brighter yellow sides of the head and by having traces of ochraceous on the forehead.

Five specimens examined.

<sup>2</sup> *Dendroica petechia solaris* Wetmore: Much like *D. p. albicollis*, but on average slightly larger; above slightly lighter and under parts a little paler, the color differences being more pronounced in females (Wetmore, l.c.). We have not seen this form.

*Range*.—Islands of Gonave and Petite Gonave, off Hispaniola, Greater Antilles.

**\**Dendroica petechia flaviceps* Chapman.<sup>1</sup> BAHAMA GOLDEN WARBLER.**

*Dendroica petechia flaviceps* Chapman, Bull. Amer. Mus. N. H., 4, p. 310, 1892—Rum Cay, Bahamas (type in the American Museum of Natural History, New York); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 517, 1902—Bahamas (monog.); Allen, Auk, 22, p. 130, 1905—Great Abaco, Moraine Cay, and Great Sale Cay; Riley, Auk, 22, p. 358, 1905—Rum Cay and Watlings Island; idem, in Shattuck, The Bahama Islands, p. 365, 1905—Bahamas; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 432, 460, 1911—Great Inagua, Watlings Island, and Andros (crit.); Peters, Proc. Biol. Soc. Wash., 40, p. 35, 1927—Bahamas (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 332, 1930—Bahamas (habits).

*Dendroica petechia flavivertex* (lapsus) Bangs, Auk, 17, p. 292, 1900—Nassau, New Providence.

*Sylvicola petechia* (not *Motacilla petechia* Linnaeus) Bryant, Proc. Bost. Soc. N. H., 11, p. 67, 1866—Inagua.

*Dendroeca petechia* Cory, Bds. Bahama Is., p. 57, 1890—Inagua and Long Island.

*Dendroica petechia* Cory, Auk, 3, p. 29, 1886—part, Bahamas; Northrop, Auk, 8, p. 68, 1891—Mangrove Key.

*Dendroeca gundlachi* (not of Baird) Sharpe, Cat. Bds. Brit. Mus., 10, p. 278, 1885—part, Bahamas; Bonhote, Ibis, 1903, p. 278—Andros (Grassy Creek, Spanish Wells) and Little Abaco.

*Dendroica petechia*  $\beta$  *gundlachi* Ridgway, Proc. U. S. Nat. Mus., 8, p. 349, 1885—part, Bahamas.

*Dendroica petechia gundlachi* Cory, Auk, 3, p. 30, 1886—part, Bahamas; idem, Bds. W. Ind., p. 44, 1889—part, Bahamas; idem, Auk, 8, pp. 295, 296, 297, 350, 351, 1891—Bahamas (Caicos Island, Inagua, Abaco, Great Bahama); Ridgway, l.c., 8, pp. 335, 336, 338, 339, 1891—New Providence, Eleuthera, Watlings Island, Rum Cay, and Concepción Island; Cory, l.c., 9, pp. 48, 49, 1892—Mariguana, Watlings Island, and Inagua.

*Range*.—Bahama Islands.

185: Bahamas (Great Bahama, 2; Abaco, 2; Eleuthera, 2; Watlings, 19; Rum Cay, 1; Acklin Island, Bird Rock, 1; Mariguana, 34; Caicos, 3; Inagua, 121).

**\**Dendroica petechia cruciana* Sundevall.<sup>2</sup> PORTO RICAN GOLDEN WARBLER.**

<sup>1</sup> *Dendroica petechia flaviceps* Chapman is exceedingly close to *D. p. gundlachi*, but generally brighter in coloration and has the wing more rounded. Many specimens are, however, practically indistinguishable.

<sup>2</sup> *Dendroica petechia cruciana* Sundevall is very close to *D. p. bartholemica*, but may generally be separated by slightly brighter, more yellowish upper parts.

Birds from Virgin Gorda and Anegada seem to me indistinguishable from others taken in Porto Rico and St. Croix.

*Dendroeca petechia* b) *cruciana* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 608, 1870—St. Croix (based on *Dendroica* — Baird, Rev. Amer. Bds., 1, p. 201, 1865, descr. spec. ex St. Croix in coll. of A. Newton; type now in University Museum, Cambridge, Engl.).

*Dendroeca aestiva* (not *Motacilla aestiva* Gmelin) Newton, Ibis, 1859, p. 143—St. Croix.

*Dendroica petechia* (not *Motacilla petechia* Linnaeus) Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 376—St. Thomas; Ridgway, Proc. U. S. Nat. Mus., 7, p. 172, 1884—St. Thomas.

*Dendroeca petechia* Sclater, Cat. Coll. Amer. Bds., p. 32, 1862—part, spec. d, St. Croix; Taylor, Ibis, 1864, p. 166—part, Porto Rico; Gundlach, Journ. Orn., 22, p. 311, 1874—Porto Rico; idem, l.c., 26, pp. 159, 167, 1878—Porto Rico (habits); idem, Anal. Soc. Esp. Hist. Nat., 7, p. 182, 1878—Porto Rico.

*Dendroica petechia*  $\gamma$  *ruficapilla* (not *Motacilla ruficapilla* Gmelin) Ridgway, Proc. U. S. Nat. Mus., 8, p. 349, 1885—part, Porto Rico, St. Thomas, and St. Croix.

*Dendroeca ruficapilla* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 275, 644, 1885—part, spec. a, b, d, St. Croix, St. Thomas, and Porto Rico.

*Dendroica petechia ruficapilla* Cory, Auk, 3, p. 31, 1886—part, Porto Rico and St. Thomas; idem, Bds. W. Ind., p. 45, 1889—part, Porto Rico and St. Thomas.

*Dendroica ruficapilla* Cory, Auk, 7, p. 374, 1890—Anegada; idem, l.c., p. 375, 1890—Virgin Gorda.

*Dendroica petechia bartholemica* (not of Sundevall) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 518, 1902—part, Porto Rico, Vieques, St. Thomas, Virgin Gorda, Anegada, and St. Croix; Bowditch, Auk, 20, p. 18, 1903—San Juan Bay and near Mayagüez, Porto Rico; Wetmore, Bull. U. S. Dept. Agric., 326, p. 105, 1916—Porto Rico (habits); idem, Auk, 33, p. 418, 1916—Vieques; idem, l.c., 34, p. 55, 1917—Louis Peña and Culebrita; idem, l.c., 34, p. 62, 1917—Culebra; Struthers, l.c., 40, p. 477, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 117, 1926—Porto Rico (habits); Peters, Proc. Biol. Soc. Wash., 40, p. 36, 1927—part, St. Thomas, Tortola, Virgin Gorda, and Anegada.

*Dendroica petechia cruciana* Peters, Proc. Biol. Soc. Wash., 40, p. 35, 1927—Porto Rico, Vieques, and St. Croix (crit.); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 507, 1927—Porto Rico to Anegada (crit., habits); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 331, 1930—Porto Rico to Anegada and St. Croix (habits).

*Dendroeca bartholemica* Nicoll, Ibis, 1904, pp. 575, 576—St. Croix and St. Thomas.

*Range*.—Island of Porto Rico and the Virgin Islands (Vieques, Culebra, Culebrita, Louis Peña, St. Croix, St. Thomas, Tortola, St. John, Virgin Gorda, and Anegada).

49: Porto Rico (Mayagüez, 4); Virgin Islands (St. Croix, 12; Virgin Gorda, 19; Anegada, 14).

**\*Dendroica petechia bartholemica** Sundevall. ST. BARTHOLOMEW GOLDEN WARBLER.

*Dendroeca petechia* a) *bartholemica* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 607, 1870—St. Bartholomew (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 30, 1926).

*Dendroeca petechia* var. *ruficapilla* (not *Motacilla ruficapilla* Gmelin) Lawrence, Proc. U. S. Nat. Mus., 1, p. 486, 1878—Barbuda and Antigua.

*Dendroeca petechia* γ *ruficapilla* Ridgway, Proc. U. S. Nat. Mus., 8, p. 349, 1885—part, St. Bartholomew, St. Kitts, St. Eustatius, and Antigua.

*Dendroeca ruficapilla* Sharpe, Cat. Bds. Brit. Mus., 10, p. 275, 1885—part, spec. c, St. Bartholomew, Antigua, and Barbuda; Selater, Proc. Zool. Soc. Lond., 1892, p. 499—Anguilla; Nicoll, Ibis, 1904, p. 571—Montserrat.

*Dendroica petechia ruficapilla* Cory, Auk, 3, p. 31, 1886—part, Barbuda and Antigua; idem, Bds. W. Ind., p. 45, 1889—part, Barbuda and Antigua.

*Dendroica ruficapilla* Cory, Auk, 8, p. 47, 1891—Antigua; idem, l.c., 8, pp. 48, 49, 1891—St. Eustatius and St. Kitts.

*Dendroeca petechia* (not *Motacilla petechia* Linnaeus) Lawrence, Proc. U. S. Nat. Mus., 1, pp. 233, 239, 1878—Antigua and Barbuda.

*Dendroica petechia bartholemica* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 518, 1902—part, Anguilla, St. Bartholomew, St. Eustatius, St. Christopher, Barbuda, and Antigua; Riley, Smiths. Misc. Coll., 47, p. 290, 1904—Barbuda and Antigua (crit.); Peters, Auk, 44, p. 537, 1927—Anguilla; idem, Proc. Biol. Soc. Wash., 40, p. 36, 1927—part, Anguilla, St. Eustatius, St. Kitts, Nevis, and Antigua (crit.); Danforth, Auk, 47, p. 47, 1930—St. Martin (Simpson's Bay, Great Bay) and St. Eustatius; Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 331, 1930—northern Lesser Antilles from Anguilla and St. Martin to Antigua and Montserrat (habits).

*Dendroeca bartholemica* Nicoll, Ibis, 1904, pp. 573, 574—St. Kitts and Antigua.

*Range*.—Northern Lesser Antilles (Anguilla, St. Martin, St. Bartholomew, St. Eustatius, St. Kitts, Nevis, Barbuda, Antigua, and Montserrat).<sup>1</sup>

35: Lesser Antilles (St. Bartholomew, 2; St. Eustatius, 13; St. Kitts, 14; Antigua, 6).

**\*Dendroica petechia melanoptera** Lawrence.<sup>2</sup> GUADELOUPE GOLDEN WARBLER.

<sup>1</sup> As stated above, I am inclined to agree with Wetmore that, if *cruciana* and *bartholemica* be kept distinct, the range of the latter should be restricted to the northern Lesser Antilles east of the Anegada Channel. Montserrat, whence we have no material, is included here on Bond's authority. Nicoll (Ibis, 1904, p. 571) referred three birds from that island to *D. "ruficapilla"* [= *D. p. melanoptera*], an allocation which seems to be open to serious doubt.

<sup>2</sup> *Dendroica petechia melanoptera* Lawrence: Similar to *D. p. bartholemica*, but decidedly smaller; rufous crown patch in adult males much more extensive; female frequently with traces of rufous in the crown.

Birds from Marie Galante agree with those from Guadeloupe, while Dominican specimens are slightly larger.

*Dendroeca petechia* var. *melanoptera* Lawrence, Proc. U. S. Nat. Mus., 1, p. 453, 1879—Guadeloupe (type in U. S. National Museum).

*Dendroeca petechia* (not *Motacilla petechia* Linnaeus) Taylor, Ibis, 1864, p. 166—part, Dominica; Lawrence, Proc. U. S. Nat. Mus., 1, p. 54, 1878—Dominica (nest and eggs).

*Dendroeca petechia* ♂ *melanoptera* Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—Guadeloupe and Dominica.

*Dendroeca petechia melanoptera* Cory, Auk, 3, p. 31, 1886—Guadeloupe and Dominica; idem, Bds. W. Ind., p. 45, 1889—Guadeloupe and Dominica; idem, Auk, 8, p. 49, 1891—Guadeloupe; Verrill, Trans. Conn. Acad. Sci., 8, p. 341, 1892—Dominica (habits, nest, and eggs).

*Dendroeca melanoptera* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 279, 644, 1885—Dominica and Guadeloupe; Sclater, Proc. Zool. Soc. Lond., 1889, p. 326—Dominica.

*Dendroeca rufigula* (not of Baird) Cory, Ibis, 1886, pp. 473, 474—Marie Galante and Grande Terre, Guadeloupe.

*Dendroeca ruficapilla ruficapilla* (not *Motacilla ruficapilla* Gmelin) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 523, 1902—Guadeloupe and Dominica; Noble, Bull. Mus. Comp. Zool., 60, p. 391, 1916—Guadeloupe (Goyave, Sainte Rose, Sainte Claude) (habits).

*Dendroeca ruficapilla* Nicoll, Ibis, 1904, p. 568—Roseau Harbor, Dominica.

*Dendroeca petechia ruficapilla* Peters, Proc. Biol. Soc. Wash., 40, p. 37, 1927—Guadeloupe and Dominica (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Dominica; idem, l.c., 82, p. 330, 1930—Guadeloupe, Dominica, Desirade, and Marie Galante (crit.).

*Range*.—Islands of Guadeloupe, Dominica, Desirade, and Marie Galante (possibly also Ile des Saintes), Lesser Antilles.

42: Guadeloupe, 35; Dominica, 3; Marie Galante, 4.

**\**Dendroeca petechia ruficapilla* (Gmelin).<sup>1</sup> MARTINIQUE GOLDEN WARBLER.**

<sup>1</sup> *Dendroeca petechia ruficapilla* (Gmelin), although easily distinguished from all other Antillean races by the adult male having the throat and sides of the head rufous, is otherwise so closely connected with them through the coloration of the female and immature plumage that I cannot see any reason for its specific separation. The Martinique bird is merely a small edition of the continental *D. p. erithachorides*, and the reappearance of this rufous-throated form in the heart of the range of yellow-throated races seems to afford good evidence for considering the Golden Warblers and Mangrove Warblers (*D. erithachorides* group) as a single taxonomic unit, inasmuch as nowhere two representatives are known to coexist during the breeding season.

As to the proper name of the Martinique Golden Warbler, I do not see how we can avoid using Gmelin's term. The description of *Motacilla ruficapilla*, based upon a specimen from Martinique in the collection of Abbé Aubry, applies very well to females (cf. "la gorge, la partie inférieure du col et la poitrine sont jaunes et variées de taches longitudinales rousses"), and there is evidently no valid ground for the assumption that an error had been made with respect to the locality.

Another probable synonym is *Dendroeca granadensis* Sharpe (Cat. Bds. Brit. Mus., 10, p. 284, 1885), based on three specimens from "Colombia" in the

*Motacilla ruficapilla* Gmelin, Syst. Nat., 1, (2), p. 971, 1789—based on "Le Figuier de la Martinique" Brisson, Orn., 3, p. 490, pl. 22, fig. 4; Martinique (type in coll. of M. Aubry;=female).

*Sylvia ruficapilla* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 228, 1817—Martinique (descr. male and female).

*Dendroica rufigula* Baird, Rev. Amer. Bds., 1, p. 204, 1865—Martinique (type in coll. of Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 23, 1899); Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—Martinique; Cory, Auk, 3, p. 32, 1886—Martinique (descr.); idem, l.c., 4, p. 95, 1887—Martinique; idem, Bds. W. Ind., p. 46, 1889—Martinique; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 526, 1902—Martinique (monog.).

*Dendroeca rufigula* Lawrence, Proc. U. S. Nat. Mus., 1, p. 353, 1879—Martinique (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 285, 645, 1885—Martinique.

*Dendroica erithachorides rufigula* Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 332, 1930—Martinique (crit., habits).

*Range*.—Island of Martinique, Lesser Antilles.

4: Martinique.

### ***Dendroica petechia babad* Bond.<sup>1</sup> SANTA LUCIA GOLDEN WARBLER.**

British Museum, one of which I have been permitted to examine through the good offices of Mr. N. B. Kinnear. The skin (of a preparation unknown to me) still bears an old label: "E. Mus. P. L. Sclater. *Dendroeca vieillotii*. No. in Cat. 169, c. Mexico? Verreaux," the locality (in Sclater's handwriting) being crossed out and corrected by Chubb to "Colombia." It is much smaller (wing, 56; tail, 46 mm.) than any of the continental races of *petechia*, but agrees in size with the Martinique form (*ruficapilla*). Compared with three adult males from Martinique, it differs, however, by the much paler and less extensive rufous color on the head, only the forehead and middle crown being dull ochraceous tawny and passing gradually into the citrine of the back, while the lores, sides of head, and short superciliaries as well as the chin and throat are yellow ochre. There are a number of rufescent (between buckthorn brown and ochraceous tawny) streaks on the foreneck and a few scattered tiny markings on chest and sides of breast, this streaking being much narrower, paler, and more restricted than in the males from Martinique, and the yellow ground-color of the under parts is much less brilliant. Although I have at present only adult males from Martinique for direct comparison, I am inclined to believe that *D. granadensis* may have been based on females or immature males of *D. p. ruficapilla*. At all events, it has nothing to do with any of the "*erithachorides*" forms found in Panama and Colombia. Being familiar with Verreauxian labels and their sometimes hardly decipherable or abbreviated localities, I think it quite possible that Sclater might have mistaken "Martinique" for "Mexique."

<sup>1</sup> *Dendroica petechia babad* Bond: "Similar to *D. p. melanoptera*, but slightly larger; crown patch of male more restricted and darker (a rich chestnut rather than orange rufous) and with every feather strongly tipped with yellow or greenish yellow; female without any trace of rufous on the crown or forehead." Wing, (male) 60, (female) 58; tail, 50–51; bill, 14–15.

"This race is very different from *D. p. petechia*, from Barbados, while the form and coloring of the crown patch at once distinguish it from *D. p. alsiosa*, from the Grenadines." (Bond, l.c.).



*Dendroica petechia babad* Bond, Auk, 44, p. 571, Oct., 1927—Santa Lucia (type in coll. of Academy of Natural Sciences, Philadelphia); idem, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Santa Lucia; idem, l.c., 82, p. 330, 1932—Santa Lucia.

*Range*.—Island of Santa Lucia, Lesser Antilles.

***Dendroica petechia alsiosa* Peters.<sup>1</sup> GRENADINE GOLDEN WARBLER.**

*Dendroica petechia alsiosa* Peters, Proc. New Engl. Zool. Cl., 9, p. 41, Feb., 1926—Prune Island (east of Union Island), Grenadines (type in Museum of Comparative Zoology, Cambridge, Mass.); idem, Proc. Biol. Soc. Wash., 40, p. 38, 1927—Grenada and the Grenadines (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 330, 1932—Grenadines and (?) Grenada (habits).

*Dendroica petechia* (not *Motacilla petechia* Linnaeus) Wells, Proc. U. S. Nat. Mus., 9, "1886," p. 611, pub. Feb., 1887—Grenada.

*Dendroica ruficapilla* (not *Motacilla ruficapilla* Gmelin) Clark, Proc. Bost. Soc. N. H., 32, p. 294, 1905—Grenada, Carriacou (Harvey Vale), Prune Island, and Union Island (near Ashton and Bloody Bay).

*Range*.—Island of Grenada (one record) and the Grenadines (Carriacou, Union, and Prune).

**\**Dendroica petechia petechia* (Linnaeus).<sup>2</sup> BARBADOS GOLDEN WARBLER.**

*Motacilla petechia* Linnaeus, Syst. Nat., 12th ed., 1, p. 334, 1766—based on "The Yellow Red-pole" Edwards, Glean. Nat. Hist., 1, p. 99, pl. 256; habitat unknown, Barbados suggested as type locality (auct. Peters, Proc. Biol. Soc. Wash., 40, p. 37, 1927).<sup>3</sup>

*Dendroica capitalis* Lawrence, Proc. Acad. Nat. Sci. Phila., 20, p. 359, Dec., 1868—Barbados (type in coll. of Geo. N. Lawrence, now in the American Museum of Natural History, New York); Salvin, Ibis, 1874, p. 306—

<sup>1</sup> *Dendroica petechia alsiosa* Peters: Similar to *D. p. melanoptera*, but slightly larger; bill stouter and more decurved; adult male with the forehead golden yellow like the lores (instead of orange rufous like the crown). Wing (male), 61–63; tail, 51–53; bill, 14–15.

This form, of which we have seen but two males from Carriacou, seems well characterized. It is said to be common on Prune Island, less so on Carriacou and Union Islands. From Grenada proper there is only one record, an immature male, taken by Grant Wells many years ago, which A. H. Clark refers to the present form.

<sup>2</sup> *Dendroica petechia petechia* (Linnaeus) is a strongly marked race by reason of its dark chestnut forehead and crown, sharply defined from the broad golden yellow loreal and superciliary streak. The bill has about the same length as in *D. p. alsiosa*.

<sup>3</sup> As has been clearly set forth by Peters, the specific name *petechia*, long employed for the Jamaican Golden Warbler, must be transferred to the present race. Edwards's figure of "The Yellow Red-pole," the only basis of Linné's account, is indeed an excellent representation of the Barbados bird.

Barbados (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 280, 645, 1885—Barbados; Cory, Ibis, 1886, p. 472—Barbados; Fielden, l.c., 1889, p. 481—Barbados (habits, nest); Nicoll, l.c., 1904, p. 556—Barbados.

*Dendroica petechia c) barbadensis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 608, 1870—based on "*Dendroica* —" Baird, Rev. Amer. Bds., 1, p. 201, spec. ex Barbados (type in U. S. National Museum).

*Dendroica capitalis* Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—Barbados; Cory, Auk, 3, p. 31, 1886—Barbados (descr.); idem, Bds. W. Ind., p. 45, 1889—Barbados; Clark, Proc. Bost. Soc. N. H., 32, p. 294, 1905—Barbados.

*Dendroica ruficapilla capitalis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 526, 1902—Barbados (monog.).

*Dendroica petechia* Selater, Proc. Zool. Soc. Lond., 1874, p. 174—Barbados.

*Dendroica petechia petechia* Peters, Proc. Biol. Soc. Wash., 40, p. 37, 1927—Barbados (crit.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Barbados (song); idem, l.c., 82, p. 330, 1930—Barbados.

*Range*.—Island of Barbados, Lesser Antilles.

6: Lesser Antilles (Barbados, 6).

**\**Dendroica petechia rufopileata* Ridgway.<sup>1</sup> CURACAO GOLDEN WARBLER.**

*Dendroica rufopileata* Ridgway, Proc. U. S. Nat. Mus., 7, p. 173, 1884—Curaçao, Dutch West Indies (type in U. S. National Museum); Berlepsch, Journ. Orn., 40, p. 76, 1892—Curaçao (crit.); Peters, l.c., p. 116, 1892—Curaçao (habits).

*Dendroica rufo-pileata* Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—"Old Providence," error for Curaçao; Robinson, Flying Trip to Tropics, p. 165, 1895—Curaçao.

*Dendroica rufopileata* Sharpe, Cat. Bds. Brit. Mus., 10, p. 281, 1885—Curaçao; Hartert, Ibis, 1893, pp. 295, 311, 327—Aruba, Curaçao, and Bonaire (crit., habits, nest); Lowe, Ibis, 1907, pp. 119, 265—Blanquilla and Margarita (crit.).

<sup>1</sup> *Dendroica petechia rufopileata* Ridgway is with difficulty distinguishable from *D. p. petechia* by the lesser extent of the rufous crown patch and on average larger size. All the other alleged characters indicated by various authors fail to hold in the large series of Field Museum.

Birds from different islands show certain variations, but even with the present extensive material I cannot bring myself to advocate further subdivision. Specimens from Aruba, Curaçao, and Bonaire have fairly uniform bright yellowish green upper parts, and vary but slightly in size. Males from Aruba measure on the wing from 57 to 62, those from the two other islands from 59 to 62 mm. Birds from Los Roques and Isla de Aves are darker greenish with the cap inclining to darker chestnut (fully as deep as in typical *petechia*), and their wings range from 60 to 63 mm. The Los Roques form has been described by Cory as *D. r. obscura*. If this race be maintained, the birds from Isla de Aves must undoubtedly go with it, and not with *rufopileata* as claimed by Cory. The series from Tortuga, Blanquilla, and Testigos are slightly different again, being above even brighter yellowish with wider yellow wing margins than typical *rufopileata*, though a good many cannot be separated. Instead of recognizing three more or less ill-defined local races, I rather prefer to keep the whole population under one name.

*Dendroica petechia rufopileata* Hartert, Nov. Zool., 9, p. 297, 1902—Curaçao, Bonaire, and Aruba (crit.); Peters, Proc. Biol. Soc. Wash., 40, p. 39, 1927—Islands off north coast of Venezuela (crit.).

*Dendroica ruficapilla rufopileata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 525, 1902—Curaçao (monog.); Lowe, Ibis, 1909, p. 318—Testigo Grande; Cory, Field Mus. Nat. Hist., Orn. Ser., 1, pp. 202, 208, 213, 215, 218, 222, 225, 232, 250, 1909—Aruba, Curaçao, Bonaire, Las Aves, Orchilla, Tortuga, Blanquilla, Testigos, and Margarita Island (crit.).

*Dendroica ruficapilla obscura* Cory, Field Mus. Nat. Hist., Orn. Ser., 1, p. 217, Oct., 1909—Los Roques, off Venezuela (type in Field Museum).

*Dendroica petechia obscura* Peters, Proc. Biol. Soc. Wash., 40, p. 39, 1927—Los Roques (crit.).

**Range.**—Islands off the north coast of Venezuela: Aruba, Curaçao, Bonaire, Las Aves, Los Roques, Orchilla, Tortuga, Blanquilla, and Testigos; accidental on Margarita Island.

94: Aruba, 14; Curaçao, 13; Bonaire, 12; Las Aves, 7; Los Roques, 18; Orchilla, 7; Tortuga, 4; Blanquilla, 11; Testigos, 7; Margarita Island, 1.

**\**Dendroica petechia flavida* Cory.<sup>1</sup> ST. ANDREWS GOLDEN WARBLER.**

*Dendroica flavida* Cory, Auk, 4, p. 179, 1887—St. Andrews Island, Caribbean Sea (type in coll. of C. B. Cory, now in Field Museum).

*Dendroica ruficapilla flavida* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 524, 1902—St. Andrews (ex Cory).

*Dendroica petechia flavida* Peters, Proc. Biol. Soc. Wash., 40, p. 39, 1927—St. Andrews (crit.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 19, 1931—part, St. Andrews (crit.).

**Range.**—St. Andrews Island, Caribbean Sea.

5: St. Andrews.

***Dendroica petechia armouri* Greenway.<sup>2</sup> OLD PROVIDENCE GOLDEN WARBLER.**

*Dendroica petechia armouri* Greenway, Proc. New Engl. Zool. Cl., 13, p. 63, April, 1933—Old Providence Island, Caribbean Sea (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Dendroica petechia flavida* (not of Cory) Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, Part 10, p. 19, 1931—part, Old Providence (crit.).

**Range.**—Old Providence Island, Caribbean Sea.

<sup>1</sup> *Dendroica petechia flavida* Cory: Much like *D. p. eoa* on the upper parts, but smaller, with shorter, slenderer bill, and breast much more boldly streaked with chestnut. Wing (male), 60–62; tail, 56–58; bill, 12½–13.

<sup>2</sup> *Dendroica petechia armouri* Greenway: Closely similar to *D. p. flavida*, but crown yellow instead of orange, and chestnut streaking below still more extensive. Wing (male), 68½; tail, 54; bill, 13. (Greenway, l.c.)

**\*Dendroica petechia rufivertex** Ridgway.<sup>1</sup> COZUMEL GOLDEN WARBLER.

*Dendroica petechia rufivertex* Ridgway, Proc. Biol. Soc. Wash., 3, p. 21, 1885—Cozumel Island (type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 8, p. 348, 1885—Cozumel (full descr.); idem, l.c., 8, p. 563, 1885—Cozumel; Peters, Proc. Biol. Soc. Wash., 40, p. 40, 1927—Cozumel (crit.).

*Dendroica ruficapilla rufivertex* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 524, 1902—Cozumel (monog.); Griscom, Amer. Mus. Nov., 236, p. 12, 1926—Cozumel (habits).

*Dendroica petechia* (not *Motacilla petechia* Linnaeus) Salvin, Ibis, 1888, p. 247—Cozumel (crit.).

Range.—Cozumel Island, off the coast of Yucatan.

2: Cozumel Island.

**\*Dendroica petechia bryanti** Ridgway. BRYANT'S GOLDEN WARBLER.

*Dendroica vieillotii* var. *bryanti* Ridgway, Amer. Natur., 7, p. 605, 1873—part, Mexico (Yucatan) and Honduras (type from Belize, British Honduras, in U. S. National Museum).

*Dendroica vieilloti* (i) (not of Cassin) Salvin, Ibis, 1864, p. 380—Half Moon Cay, British Honduras; idem, l.c., 1866, p. 192—cays off the Belize coast; Baird, Rev. Amer. Bds., 1, p. 203, 1865—part, Caucun, Yucatan; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 200, 1869—Yucatan (Sisal, Progreso, Celestin); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 125, 1880—part, Yucatan (Caucun, Sisal, Progreso, Celestin) and British Honduras (Belize, Half-moon Cay); Boucard, Proc. Zool. Soc. Lond., 1883, p. 441—Silam and Rio Lagartos, Yucatan.

*Dendroica bryanti* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 284, 645, 1885—part, spec. b-g, Yucatan (Progreso) and British Honduras (Half-moon Cay, Belize); Salvin, Ibis, 1888, p. 248—Holbox and Bonacca Islands; Salvin and Godman, l.c., 1889, p. 237—Tampico, Mexico.

*Dendroica bryanti* Stone, Proc. Acad. Nat. Sci. Phila., 1890, p. 210—Progreso, Yucatan.

*Dendroica vieilloti bryanti* Cherrie, Proc. U. S. Nat. Mus., 14, p. 525, 1891—Puerto Limón, Costa Rica (crit.).

*Dendroica bryanti bryanti* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 529, 1902—Caribbean coast of Central America from Tampico to Puerto Limón, Costa Rica (monog.); Carriker, Ann. Carnegie Mus., 6, p. 813, 1910—Costa Rica (Puerto Limón, Uvita Island); Cole, Bull. Mus. Comp. Zool., 50, p. 139, 1906—Chichen Itza and Progreso, Yucatan; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—eastern Quintana Roo; idem, l.c., 236, p. 4, 1926—Chinchorro Bank, Yucatan.

<sup>1</sup> *Dendroica petechia rufivertex* Ridgway is much like *D. p. melanoptera* in general coloration, but much more heavily as well as more extensively streaked with rufous underneath; it is also slightly larger. From *D. p. flavida*, of St. Andrews, it may be distinguished by greater dimensions, much larger bill, much more rufous crown, and less boldly streaked under parts.

*Dendroica erithachorides bryanti* Peters, Bull. Mus. Comp. Zool., 71, p. 335, 1931—Tampico to Puerto Limón.

*Range*.—Mangroves and salt-water growths on the Gulf coast of Mexico from Tampico, Tamaulipas, south on the Caribbean coast of Central America to Puerto Limón, Costa Rica.

25: Yucatan ("Cozumel Island,"<sup>1</sup> 1; Holbox Island, 1; Rio Lagartos, 7; unspecified, 13); British Honduras (Belize, 1); Costa Rica (Isla de Uva, Limón, 2).

**\**Dendroica petechia castaneiceps* Ridgway. MANGROVE GOLDEN WARBLER.**

*Dendroica bryanti castaneiceps* Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—La Paz, Lower California (type in U. S. National Museum); Bryant, Proc. Calif. Acad. Sci., (2), 2, p. 309, 1889—Lower California (La Paz, Pichalingue Bay, and Espiritu Santo Island); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 530, 1902—part, Pacific coast of Mexico (Lower California and Mazatlan, Sinaloa); Brewster, Bull. Mus. Comp. Zool., 41, p. 181, 1902—La Paz, Lower California (crit., habits); Thayer, Condor, 11, p. 10, 1909—La Paz (nest and eggs); Townsend, Bull. Amer. Mus. N. H., 48, p. 22, 1923—Santa Maria Bay, La Paz, and "San José del Cabo" (error), Lower California; McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 312, 1926—Magdalena Bay, Lower California; Huey, Condor, 29, pp. 241, 243, 1927—San Ignacio Lagoon and Pond Lagoon, Lower California.

*Dendroica vieilloti* (not of Cassin) Baird, Rev. Amer. Bds., 1, p. 203, 1865—part, Mazatlan, Sinaloa (crit.).

*Dendroica vieilloti* Lawrence, Mem. Bost. Soc. N. H., 2, p. 270, 1874—Mazatlan and "Guadalajara," Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 125, 1880—part, Mazatlan and "Guadalajara."

*Sylvicola vieilloti* Finsch, Abhandl. Naturw. Ver. Bremen, 2, p. 329, 1874—Mazatlan.

*Dendroica vieillottii* var. *bryanti* Ridgway, Amer. Natur., 7, p. 605, 1873—part, Mazatlan, Mexico.

*Dendroica vieilloti bryanti* Ridgway, Proc. U. S. Nat. Mus., 4, p. 414, 1882—La Paz, Lower California; Belding, l.c., 5, p. 536, 1883—La Paz.

*Dendroica erithachorides castaneiceps* Oberholser, Auk, 16, p. 85, 1919—Pacific coast of Mexico (crit.); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 42, 1927—Labrados, Sinaloa, and San Blas, Nayarit; Grinnell,

<sup>1</sup> This locality is clearly erroneous. The specimen has no original label, but merely a printed tag "E Mus. O. S. & F. D. G. Cozumel I., Yucatan, . . . 1885. G. F. Gaumer," the date being left in blank. It formed part of the collection upon which Salvin's account of the "Birds of the Islands of the Coast of Yucatan and of the Bay of Honduras" in the "Ibis" for 1888 et seq. was based. In this paper (p. 248) the author expressly states that "*D. petechia* [= *D. p. rufivertex*] is found in Cozumel Island, to the exclusion of *D. bryanti* and the migratory *D. aestiva*," while *D. bryanti* is credited to the islands of Holbox and Bonacca. There seems, therefore, little doubt that the specimen really originated in one of these islands, and that the locality "Cozumel" is due to a confusion of the label.

Univ. Calif. Pub. Zool., 32, p. 200, 1928—Cape district of Lower California; Peters, Bull. Mus. Comp. Zool., 71, p. 335, 1931—Pacific coast of Mexico (Mazatlan) and Lower California "south to Guatemala"; van Rossem, Trans. San Diego Soc. N. H., 6, p. 282, 1931—Sonora (Tobáři Bay, Guaymas, Kino Bay, Tepopa Bay).

*Range*.—Mangrove swamps on the Pacific coast of Mexico, in states of Sinaloa (Mazatlan, Labrados), Sonora, Nayarit (San Blas), and Lower California.

5: Lower California (La Paz, 5).

**\**Dendroica petechia xanthotera* Todd.<sup>1</sup> SOUTHERN MANGROVE GOLDEN WARBLER.**

*Dendroica bryanti xanthotera* Todd, Proc. Biol. Soc. Wash., 37, p. 123, 1924—Puntarenas, Costa Rica (type in Carnegie Museum).

*Dendroica vieilloti* (not of Cassin) Salvin, Ibis, 1869, p. 313—Tempate, Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 52—Puntarenas, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 125, 1880—part, Tempate, Costa Rica.

*Dendroica bryanti* (not of Ridgway) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 284, 645, 1885—part, spec. a, h, Nicaragua and Tempate, Costa Rica.

*Dendroica bryanti castaneiceps* (not of Ridgway) Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 106, 1887—Puntarenas, Costa Rica; Lantz, Trans. Kansas Acad. Sci., 16, p. 223, 1899—San José, Guatemala; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 530, 1902—part, Costa Rica (Puntarenas); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 128, 1907—San José, Guatemala; Carriker, Ann. Carnegie Mus., 6, p. 812, 1910—Pacific coast of Costa Rica (Pígres, Puntarenas).

*Dendroica vieilloti castaneiceps* Cherrie, Proc. U. S. Nat. Mus., 14, p. 525, 1891—Puntarenas, Costa Rica (crit.); idem, Anal. Inst. Fis.-Geog. y Mus. Nac. Costa Rica, 4, p. 136, 1893—Punta Mala, delta del Diquí Costa Rica.

*Dendroica erithachorides xanthotera* Peters, Bull. Mus. Comp. Zool., 71, p. 335, 1931—Pacific coast of Guatemala and Costa Rica; Griscom, Bull. Amer. Mus. N. H., 64, p. 329, 1932—Ocos, Guatemala (crit.).

*Range*.—Mangrove swamps and brackish estuaries of the Pacific coast of Central America from Guatemala to Costa Rica (Rio Diquís).<sup>2</sup>

9: Guatemala (San José, Escuintla, 1); Costa Rica (Punta Mala, 3; Punta Piedra, Guanacaste, 5).

<sup>1</sup> *Dendroica petechia xanthotera* Todd: Similar to *D. p. castaneiceps*, but adult males with rufous gular area extended onto the foreneck, the rufous pectoral streaks more conspicuous, and the yellow area on the lateral rectrices more sharply defined as well as more extensive, the dusky green color not encroaching on the inner webs except terminally.

*Additional material examined*.—Costa Rica: Golfito, Golfo Dulce, 1.

<sup>2</sup> The record from "San José, Costa Rica" of *Dendroica vieilloti* by Frantzius (Journ. Orn., 17, p. 293, 1869) is unquestionably erroneous.

**\**Dendroica petechia erithachorides* Baird.<sup>1</sup> COLOMBIAN GOLDEN WARBLER.**

*Dendroica erithachorides* (typographical error) Baird, Rep. Expl. Surv. Railroad Mississ. River to Pacif., 9, p. 283 (in text), 1858—"South America" (types from Cartagena, Colombia, in U. S. National Museum).

*Dendroica vieilloti* Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 192—Cartagena, Colombia (types in U. S. National Museum); Baird, Rev. Amer. Bds., 1, p. 203, 1865—part, Cartagena (crit.); Ridgway, Proc. U. S. Nat. Mus., 8, p. 350, 1885—Cartagena.

*Rhimamphus ruficeps* Cabanis, Journ. Orn., 8, p. 326, 1860—Cartagena, Colombia (type in Berlin Museum; cf. Peters, Bull. Mus. Comp. Zool., 71, p. 335 [footnote], 1931).

*Dendroica petechia* i) *panamensis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 609, 1870—new name for *Dendroica vieilloti* Cassin.

*Dendroica vieilloti* Sclater, Cat. Coll. Amer. Bds., p. 32, 1862—part, spec. a, c, "New Granada"; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 125, 1880—part, northern Colombia.

*Dendroica erithachorides* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 527, 1902—part, northern Colombia (Cartagena); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 274, 1918—Mount Hope and Toro Point, Panama; Hallinan, Auk, 41, p. 324, 1924—part, spec. e, Gorgona, Panama.

*Dendroica erithachorides erithachorides* Todd and Carriker, Ann. Carnegie Mus., 14, p. 452, 1922—Punto Caiman, Cienaga Grande, Colombia; Peters, Bull. Mus. Comp. Zool., 71, pp. 333, 335, 1931—Almirante Bay region, Panama (Almirante, Quebrada Nigra, Shepherd Island, Western River, Cricamola) (crit., range).

**Range.**—Mangroves on the Atlantic coast of Panama, west to Almirante Bay, and Caribbean coast of Colombia from Cartagena to the Cienaga Grande, Magdalena.

1: Panama (Colón, 1).

**\**Dendroica petechia aequatorialis* Sundevall.<sup>2</sup> PANAMA GOLDEN WARBLER.**

*Dendroica petechia* h) *aequatorialis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 609, 1870—"Guayaquil," errore=Panama City; cf. Peters, Bull. Mus. Comp. Zool., 71, p. 334 (in text), 1931 (type in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 31, 1926).

<sup>1</sup> *Dendroica petechia erithachorides* Baird, in the male sex, is easily separated from *D. p. xanthotera* by much lighter, rufous rather than chestnut coloration of the head, lesser extent of the rufous gular area, and much wider rufous pectoral streaks.

<sup>2</sup> *Dendroica petechia aequatorialis* Sundevall: Very similar to *D. p. erithachorides*, but adult male with rufous pectoral streaks decidedly wider and coalescent with the rufous gular area.

As has been pointed out by Peters, this form appears to be entitled to Sundevall's name *aequatorialis*, whose type very likely came from the vicinity of Panama City, and not from Guayaquil. Birds from the Pearl Islands are evidently the same as those from the Atlantic coast of Panama.

*Dendroeca vielloti* (not of Cassin) Sharpe, Cat. Bds. Brit. Mus., 10, pp. 283, 645, 1885—"Gorgona Island" and Veragua.

*Dendroica viellotii* Bangs, Auk, 18, p. 30, 1901—San Miguel Island, Panama.

*Dendroica erithachorides* (not of Baird) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 527, 1902—part, Isthmus of Panama (Buenaventura, Panama City), San Miguel Island, and (?) Veragua; Hallinan, Auk, 41, p. 324, 1924—part, spec. a-d, f, Corozal, Cruces Trail, and Balboa, Panama.

*Dendroica erithachorides* Rendahl, Ark. Zool., 13, No. 4, p. 46, 1920—Saboga Island, Panama Bay.

*Chrysocantor erithachorides* Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 155, 1905—San Miguel and Saboga, Pearl Archipelago (crit.); idem, l.c., p. 220, 1906—savanna of Panama.

*Dendroica erithachorides erithachorides* Peters, Bull. Mus. Comp. Zool., 71, p. 336, 1931—Pearl Islands and adjacent mainland of Panama.

**Range.**—Pearl Islands (San Miguel and Saboga) and adjacent Atlantic mainland of Panama.<sup>1</sup>

3: Panama (Balboa, 3).

### ***Dendroica petechia peruviana* Sundevall.<sup>2</sup> ECUADORIAN GOLDEN WARBLER.**

*Dendroeca petechia* g *peruviana* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 609, 1870—Callao, Peru, and Puna Island, near Guayaquil, Ecuador (type from "Callao" in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 30, 1926).

*Dendroeca aureola* (?) (not *Sylvicola aureola* Gould) Sclater, Proc. Zool. Soc. Lond., 28, p. 291, 1860—Esmeraldas, Ecuador.

*Dendroeca aureola* Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 744—Santa Lucia, Dept. Tumbes, Peru; idem, Orn. Pér., 1, p. 467, 1884—Santa Lucia and Tumbes, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 282, 645, 1885—part, spec. k, l, y-b', "Gorgona Island" [errone, probably=Guayaquil] and Puna Island; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 8, 1899—Ecuador (savanna of Guayaquil and Estero Carnero, Puntilla Santa Elena).

*Dendroica aureola* Ridgway, Proc. U. S. Nat. Mus., 19, p. 493, 1897—part, "Gorgona Island," western Ecuador, and western Peru.

<sup>1</sup> Its range possibly extends west into the Veraguas. No representative of the group having been obtained on Gorgona Island in recent years, this locality (attached to a specimen in the British Museum from Kellett and Wood's collections, whose indications are notoriously unreliable) remains to be corroborated.

<sup>2</sup> *Dendroica petechia peruviana* Sundevall: Very similar to *D. p. aureola*, but adult males much more broadly streaked with rufous underneath. Certain specimens have the throat clouded with rufous, and this color sometimes extends even onto the cheeks and auriculars. Such individuals closely approach *D. p. aequaloralis* and thus afford another proof for the conspecific relationship of the *erithachorides* group with *D. petechia*.

It is perhaps a little doubtful whether this form really ranges as far south as Callao, where it has not been obtained in recent times.

**Material examined.**—Ecuador: Guayaquil, 9; Puntilla Santa Elena, 1.



*Dendroica petechia aureola* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 521, 1902—part, Ecuador (Guayaquil) and Peru (Santa Lucia, Tumbes); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 356, 1903—part, coast of Peru and Ecuador.

*Dendroica petechia aequatorialis* (not of Sundevall) Chapman, Bull. Amer. Mus. N. H., 36, p. 545, 1917—Tumaco, Colombia, and coast of Ecuador (crit.); idem, l.c., 55, p. 594, 1926—Ecuador (Esmeraldas, Bahia de Carques, coast of Manaví, Jambeli, Puna Island).

*Dendroica petechia peruviana* Peters, Proc. Biol. Soc. Wash., 40, p. 41, 1927—from Tumaco, Colombia, to Peru (crit.).

**Range.**—Pacific coast of South America from Tumaco, southern Colombia, to Peru (Santa Lucia and Tumbes, Dept. Tumbes; possibly as far south as Callao).

**\**Dendroica petechia aureola* (Gould). GALAPAGOS GOLDEN WARBLER.**

*Sylvicola aureola* Gould, in Darwin, Zool. Beagle, Birds, Part 9, pl. 28, July, 1839; Part 11, Nov., 1839—Galapagos Islands (type now in British Museum).

*Dendroica aureola* Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 192—Galapagos; Ridgway, Proc. U. S. Nat. Mus., 12, p. 105, 1889—Indefatigable, Charles, James, and Chatham; idem, l.c., 19, p. 493, 1897—part, Galapagos (monog.); Townsend, Bull. Mus. Comp. Zool., 27, p. 122, 1895—Cocos Island; Rothschild and Hartert, Nov. Zool., 6, p. 147, 1899—Culpepper, Wenman, Abingdon, Bindloe, Tower, Albemarle, Narborough, James, Jervis, Duncan, Indefatigable, Chatham, Charles, Gardner, and Hood (crit.); Snodgrass and Heller, Proc. Wash. Acad. Sci., 4, p. 520, 1902—Cocos Island (crit.).

*Dendroica aureola* Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 323—Indefatigable, Bindloe, and Abingdon; Salvin, Trans. Zool. Soc. Lond., 9, p. 473, 1876—Chatham, Charles, James, Indefatigable, Bindloe, and Abingdon; Sharpe, Proc. Zool. Soc. Lond., 1877, p. 66—Charles Island; Salvin, l.c., 1883, p. 420—Charles; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 282, 645, 1885—part, spec. a-i, m-x, Galapagos.

*Dendroica petechia aureola* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 521, 1902—part, Cocos Island and Galapagos (monog.); Snodgrass and Heller, Proc. Wash. Acad. Sci., 5, p. 356, 1903—part, Cocos Island and Galapagos (Albemarle, Narborough, James, Seymour, Charles, Chatham, Bindloe, Wenman) (nest and eggs); Peters, Proc. Biol. Soc. Wash., 40, p. 40, 1927—Galapagos (crit.); Swarth, Occas. Pap. Calif. Acad. Sci., 18, p. 132, 1931—Cocos Island and Galapagos (crit.).

*Dendroica petechia f) gallapagensis* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, "1869," p. 608, 1870—James, Charles, and Chatham (type from Charles Island in Stockholm Museum; cf. Gyldenstolpe, Ark. Zool., 19, A, No. 1, p. 30, 1926).

*Dendroica petechia* var. Sundevall, Proc. Zool. Soc. Lond., 1871, p. 124—Chatham, Charles, and James.

*Dendroeca petechia* (not *Motacilla petechia* Linnaeus) Gifford, Proc. Calif. Acad. Sci., (4), 2, p. 216, 1919—Galapagos (habits).

*Range*.—Cocos Island and Galapagos Archipelago.<sup>1</sup>

11: Cocos Island, 6; Galapagos (Albemarle, 2; Charles, 2; Indefatigable, 1).

**\**Dendroica magnolia* (Wilson). MAGNOLIA WARBLER.**

*Motacilla maculosa* (not of Boddaert, 1783) Gmelin, Syst. Nat., 1, (2), p. 984, 1789—based on "Figuier tacheté de Pensilvanie" of Brisson (Orn., 3, p. 502) and "The yellow-rumped Fly-catcher" of Edwards (Glean. Nat. Hist., 1, p. 97, pl. 255); Pennsylvania.

*Sylvia magnolia* Wilson, Amer. Orn., 3, p. 65, pl. 23, fig. 2, 1811—on the banks of the Little Miami (near its junction with the Ohio), in magnolias near Fort Adams on the Mississippi, and not far from Philadelphia; Fort Adams, Mississippi, accepted as type locality (type in Peale's Museum, doubtless lost).

*Dendroica maculosa* Sharpe, Cat. Bds. Brit. Mus., 10, p. 309, 1885 (monog.); Winge, Medd. Grønln., 21, p. 280, 1899—near Godthaab, Greenland.

*Dendroica maculosa* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 532, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Eleuthera, New Providence, and Watlings Island.

*Range*.—North America from southwestern Mackenzie (casually Great Bear Lake), central British Columbia, Manitoba, and Quebec, and Newfoundland south to central Alberta, southern Saskatchewan, Minnesota, northern Michigan, and Massachusetts, and in the mountains of New York, Pennsylvania, Maryland, West Virginia, and Virginia; winters from southern Mexico (Puebla and Chiapas) to Panama, and also rarely in Haiti and Porto Rico; accidental in California, British Columbia, Greenland (one record from near Godthaab), the Bahamas, and Cuba.

143: Maine (Cape Elizabeth, 1; New Vineyard, 1; Upton, 6); Massachusetts (Lincoln, 1; Wakefield Junction, 1); Connecticut (East Hartford, 18); New York (Peterboro, 1); New Jersey (Englewood, 2); Indiana (Bluffton, 2); Illinois (Addison, 4; Auburn Park, 3; Beach, Lake County, 2; Calumet, 1; Chicago, 9; Deerfield, 7; Fox Lake, 4; Halfday, Lake County, 1; Henry, 17; Joliet, 4; Lake Forest, 12; Libertyville, 1; River Forest, 1; Ravinia, 1; unspecified, 1); Wisconsin (Beaver Dam, 14; Lake Koshkonong, 1; Milton, 1); Colorado (Fort Lyon, 1); Florida (Key West, 1); Mississippi (Holly Springs, 2); Texas (Boille, 3); Mexico (Teapa, Tabasco, 1; Yucatan,

<sup>1</sup> Six Cocos Island birds are obviously inseparable from a Galapagos series. In addition to those listed above, twenty-one more specimens, all from the Galapagos, have been examined.

Cozumel Island, 1); British Honduras (Orange Walk, 1; Ruatan Island, 1); Guatemala (Lake Amatitlan, 1; Los Amates, Izabel, 2; Mazatenango, 2; Patulul, Solola, 2); Costa Rica (Guayábo, 1); West Indies (Eleuthera, 1; Watlings, 5; Santo Domingo, 1).

**\*Dendroica tigrina (Gmelin).<sup>1</sup> CAPE MAY WARBLER.**

*Motacilla tigrina* Gmelin, Syst. Nat., 1, (2), p. 985, 1789—based on "Le Figuier brun de Canada" of Brisson (Orn., 3, p. 515, pl. 27, fig. 4) and "The Spotted Yellow Fly-catcher" of Edwards (Glean. Nat. Hist., 1, p. 101, pl. 257, lower fig.); Canada (ex Brisson) accepted as type locality.

*Sylvia maritima* Wilson, Amer. Orn., 6, p. 99, pl. 54, fig. 3, 1812—Cape May, New Jersey (type doubtless lost).

*Perissoglossa tigrina* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 335, 651, 1885 (monog.).

*Dendroica tigrina* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 537, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 365, 1905—Abaco, Little Abaco, Biminis, Berry Islands, Eleuthera, Current Islands, New Providence, Andros, Green Cay, Cay Lobos, Watlings Island, Rum Cay, Great Inagua; Todd, Ann. Carnegie Mus., 7, p. 431, 1910—New Providence, Great Inagua, Watlings Island, and Andros, Bahamas; Barbour, Mem. Nutt. Orn. Cl., 6, p. 115, 1923—Cuba; Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 539, 1928—Gros Inlet, Santa Lucia; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 506, 1927—Porto Rico, Vieques, St. Croix, and St. Thomas; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 372, 1931—Hispaniola.

*Range.*—Northern North America from southern Mackenzie, northern Ontario, New Brunswick, and Nova Scotia south to southern Manitoba, Maine, and New Hampshire, west in migration to Kansas and North Dakota; winters in the Bahamas and Greater Antilles, less frequently in the Lesser Antilles south to Santa Lucia; accidental in Yucatan (one record) and Tobago (one record).

155: Maine (Upton, 4); New York (Auburn, 3); New Jersey (Englewood, 2); Illinois (Beach, Lake County, 2; Chicago, 4; Deerfield, 5; Hegewisch, 1; Joliet, 2; Lake Forest, 6; Lake George, 1); Wisconsin (Beaver Dam, 17; unspecified, 1); Georgia (Montezuma, 1); Florida (Gainesville, 1; Key West, 7; mouth of Banana River, 2; Nassau County, 6; Puntarasa, 2; West Jupiter, 5); West Indies

<sup>1</sup> ***Dendroica carbonata* (Audubon). CARBONATED WARBLER.**

*Sylvia carbonata* Audubon, Bds. Amer. (folio), 1, pl. 60, 1829; idem, Orn. Biog., 1, p. 308, 1831—near Henderson, Kentucky (type not preserved).

*Dendroica carbonata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 540, 1902 (ex Audubon).

Known only from Audubon's description and plate of two specimens obtained in May, 1811. No bird corresponding to his account has been found since, and it is probable that the published plate was based to some extent upon memory.

(Great Bahama, 2; Berry, 2; Nassau, New Providence, 1; Eleuthera, 11; Watlings, 4; Caicos, 1; Inagua, 27; Grand Cayman, 8; Jamaica, 4; Haiti, 2; Santo Domingo, 20; St. Croix, 1).

**\*Dendroica caerulescens caerulescens (Gmelin). BLACK-THROATED BLUE WARBLER.**

*Motacilla canadensis* (not of Linnaeus, Syst. Nat., 12th ed., 1, p. 334, 1766) Linnaeus, Syst. Nat., 12th ed., 1, p. 336, 1766—based on "Le Petit Figuier cendré de Canada" of Brisson (Orn., 3, p. 527, pl. 27, fig. 6; Canada) and "The Blue Fly-catcher" of Edwards (Glean. Nat. Hist., 1, p. 91, pl. 252, upper fig.; coast of Hispaniola).

*Motacilla caerulescens* Gmelin, Syst. Nat., 1, (2), p. 960, 1789—based on "La Fauvette bleuâtre de St. Domingue" Buffon, Hist. Nat. Ois., 5, p. 164; Santo Domingo.

*Sylvia pusilla* (not of Wilson, Amer. Orn., 4, p. 17, pl. 28, fig. 3, 1811) Wilson, Amer. Orn., 5, p. 100, pl. 43, fig. 4, 1812—Pennsylvania (location of type not stated).

*Sylvia leucoptera* (not of Vieillot, 1808) Wilson, Amer. Orn., 6, p. XV, 1812—substitute for *Sylvia pusilla* Wilson, 1812.

*Sylvia palustris* (not of Bechstein, 1802) Stephens, in Shaw, Gen. Zool., 10, (2), p. 722, 1817—substitute for *Sylvia pusilla* Wilson, 1812.

*Sylvia sphagnosa* Bonaparte, Journ. Acad. Nat. Sci., 4, p. 199, 1824—substitute for *Sylvia pusilla* Wilson, 1812.

*Sylvia macropus* Vieillot, Tabl. Enc. Méth., Orn., livr. 91, p. 451, 1822—based on Wilson, Amer. Orn., 5, pl. 43, fig. 4.

*Sylvicola pannosa* Gosse, Bds. Jamaica, p. 162, 1847—Basin Spring, Jamaica (=female; type in British Museum); idem, Illust. Bds. Jam., pl. 37, 1849.

*Dendroeca caerulescens* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 329, 651, 1885 (monog.).

*Dendroica caerulescens* Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Las Nubes, Santa Marta, Colombia (Dec. 16, 1898).

*Dendroica caerulescens caerulescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 541, 1902 (monog., full bibliog.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 452, 1922—Las Nubes, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 115, 1923—Cuba; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 511, 1927—Porto Rico and Vieques; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 378, 1931—Hispaniola.

**Range.**—Northern North America from Minnesota, central Ontario, and southern Quebec south to Michigan, Pennsylvania, and Connecticut; winters from Florida to the Bahamas, Greater Antilles, and Cozumel Island, Mexico, casually to Guatemala (one record from Coban) and Colombia<sup>1</sup> (one record from Las Nubes,

<sup>1</sup> Ridgway's extension of the winter range to Peru is based on two records of *Dendroeca canadensis* by Taczanowski (Proc. Zool. Soc. Lond., 1874, p. 508; l.c., 1879, p. 223). These refer, however, to *Wilsonia canadensis* (Linnaeus); cf. Taczanowski, Orn. Pér., 1, p. 468, 1884.

Santa Marta, Dec. 16, 1898); in migration casually to the base of the Rocky Mountains; accidental on the Farallon Islands, California.

159: Maine (Upton, 1); Massachusetts (Cliftondale, 1; Lincoln, 1); Connecticut (East Hartford, 12); New York (Onasco, 2); New Jersey (Englewood, 2); Indiana (Bluffton, 1); Illinois (Beach, Lake County, 2; Chicago, 3; Deerfield, 4; Glen Ellyn, 1; Hegewisch, 1; Henry, 6; Joliet, 3; Lake Forest, 10; Ravinia, 1; River Forest, 1); Wisconsin (Beaver Dam, 9; Woodruff, Vilas County, 2; unspecified, 2); North Carolina (Raleigh, 1); South Carolina (Mount Pleasant, 1); Florida (Key West, 7; Lake Worth, 1; Nassau County, 4; New River, 3; West Jupiter, 11); West Indies (Inagua, 6; Cuba, 1; Little Cayman, 1; Jamaica, 1; Haiti, 4; Santo Domingo, 49; Anguilla, 2; at sea between Anguilla and Andros, 2).

***Dendroica caerulescens cairnsi* Coues.<sup>1</sup> CAIRNS'S WARBLER.**

*Dendroica caerulescens cairnsi* Coues,<sup>2</sup> Auk, 14, p. 96, 1897—"mountains of western North Carolina and eastern Tennessee" (type [from Craggy Mountain, Buncombe County, North Carolina] in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 358, 1930); Bangs, Auk, 15, p. 192, 1898—Cumberland Island, Georgia (Apr. 9; crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 545, 1902 (monog., full bibliog.); Oberholser, Auk, 34, p. 325, 1917 (crit.); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 380, 1931—El Rio, Dominican Republic (Oct. 5, 1916; crit.).

*Range*.—Southeastern United States in the southern Alleghenies from Maryland to Georgia; winter home not definitely known, there being only two records from the West Indies (one from Matanzas, Cuba, Feb. 14, 1900, and another from El Rio, Dominican Republic, Oct. 5, 1916).

**\**Dendroica coronata coronata* (Linnaeus). MYRTLE WARBLER.**

*Motacilla coronata* Linnaeus, Syst. Nat., 12th ed., 1, p. 333, 1766—based on "The Golden-crowned Fly-catcher" Edwards, Glean. Nat. Hist., 2, p. 187, pl. 298; Pennsylvania.

*Motacilla canadensis* Linnaeus, Syst. Nat., 12th ed., 1, p. 334, 1766—based on "Le Figuier cendré de Canada" Brisson, Orn., 3, p. 524, pl. 27, fig. 1; Canada (type in coll. of M. de Réaumur).

*Parus virginianus* Linnaeus, Syst. Nat., 12th ed., 1, p. 342, 1766—based on "Yellow-rump" Catesby (Nat. Hist. Carolina, 1, p. 58, pl. 58), and "La Mésange de Virginie" Brisson (Orn., 3, p. 575); Virginia.

<sup>1</sup> A very ill-defined race of questionable value.

<sup>2</sup> *Dendroica caerulescens cairnsi* Coues (Papers World's Congr. Orn., p. 138, 1896) is a nomen nudum.

*Motacilla umbria* Gmelin, Syst. Nat., 1, (2), p. 959, 1789—based on "Fauvette ombrée de la Louisiane" Buffon (Hist. Nat. Ois., 5, p. 162) and "Fauvette tachetée de la Louisiane" Daubenton, Pl. Enl., pl. 709, fig. 1; Louisiana.

*Motacilla pinguis* Gmelin, Syst. Nat., 1, (2), p. 973, 1789—based on "Figuier Grasset" Buffon, Hist. Nat. Ois., 5, p. 319; Louisiana.

*Motacilla cincta* Gmelin, Syst. Nat., 1, (2), p. 980, 1789—based on "Le Figuier cendré de Canada" Brisson (Orn., 3, p. 524, pl. 27, fig. 1), "Figuier à ceinture" Buffon, etc.; Canada.

*Sylvia flavopygia* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 47, "1807" [= ?1808]—based on *Parus virginianus* Linnaeus.

*Sylvia xanthorhoa* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 180, 1817—based on "Yellow-rump" Catesby, Nat. Hist. Carolina, 1, p. 58, pl. 58; Virginia.

*Dendroeca coronata* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 311, 649, 1885 (monog.); Winge, Medd. Grønland, 21, p. 281, 1899—Greenland.

*Dendroica coronata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 546, 1902 (monog., full bibliog.).

*Dendroica coronata coronata* Darlington, Bull. Mus. Comp. Zool., 71, p. 412, 1931—Cienaga, Magdalena, Colombia (March 23).

*Dendroica coronata hooveri* McGregor, Bull. Cooper Orn. Cl., 1, p. 32, 1899—Palo Alto, California (type in coll. of R. C. McGregor, now in California Academy of Sciences; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 300, 1932); Bishop, N. Amer. Fauna, 19, p. 90, 1900—Yukon region (crit.); Grinnell, Univ. Calif. Pub. Zool., 5, p. 235, 1909—Windfall, Admiralty Island, Alaska (crit.); idem, l.c., 5, p. 410, 1909—Port Nell Juan, Alaska (crit.); Oberholser, Auk, 35, p. 465, 1918 (crit., range); Swarth, Univ. Calif. Pub. Zool., 24, p. 289, 1922—Stikine region (crit.); idem, l.c., 24, p. 362, 1924—Skeena River region, British Columbia; idem, l.c., 30, p. 139, 1926—Atlin region, British Columbia (nest descr.); Grinnell, l.c., 32, p. 200, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 283, 1931—Sonora (El Dóctor, Tecoripa); Griscom, Bull. Amer. Mus. N. H., 64, p. 330, 1932—San Lucas, Guatemala.

**Range.**—North America from the tree limit in northwestern Alaska, northern Mackenzie, and Manitoba, and from central Quebec south to British Columbia, Alberta, northern Minnesota and Michigan, central Ohio, New Hampshire, and Maine, and in the mountains of New York, Vermont, and Massachusetts;<sup>1</sup> winters in the southern United States south to the Greater Antilles,<sup>2</sup> Mexico, Panama, and Colombia (Cienaga, Magdalena; one record), and on the Pacific coast from Oregon to California and Lower California; accidental in Greenland (various records) and eastern Siberia.

<sup>1</sup> The alleged western form, *D. c. hooveri*, merely differs by average larger size; but the measurements overlap to such an extent that the allocation of many individuals becomes impossible. The race is, we believe with good reasons, dropped in the latest edition of the A. O. U. Check List.

<sup>2</sup> Nicoll's assumption (Ibis, 1904, p. 579) that the Myrtle Warbler breeds on Grand Cayman Island is wholly unfounded.

227: Labrador (Anatalok Bay, 2; Bowdoin Harbor, 2); Maine (Upton, 2); Massachusetts (Brookline, 1; Chatham, 2; Great Island, 4; Medford, 2; Natick, 2); Connecticut (East Hartford, 22); New York (Holley, Orleans County, 1; Shelter Island, 1; Yates County, 1); Ohio (Columbus, 1); Indiana (Bluffton, 1); Illinois (Cairo, 1; Chicago, 3; Deerfield, 3; Glen Ellyn, 2; Grand Chain, 3; Highland Park, 2; Lake Forest, 3; Warsaw, 2); Wisconsin (Beaver Dam, 10; Lac Vieux Desert, 1; Woodruff, Vilas County, 2); Iowa (Cedar Rapids, 1); Colorado (Fort Lyon, 4); California (Haywards, 1); North Carolina (Raleigh, 3); Florida (Enterprise, 1; Gainesville, 3; Key West, 6; Mary Esther, 2; Nassau County, 4; Palm Beach, 3; Pilot Town, 3; Santa Rosa Island, 13; Town Point, Santa Rosa County, 19; Wilson, 4); Louisiana (Chef Menteur, 3; New Orleans, 5); Texas (Corpus Christi, 1); Mexico (Tampico, Tamaulipas, 2; Teapa, Tabasco, 2); Guatemala (near Tecpam, 1); Honduras (Ruatán Island, Bay of Honduras, 2); Costa Rica (Limón, 3; Guayabo, 3); West Indies (Abaco, 4; Bimini, 1; Berry, 1; Nassau, New Providence, 1; Andros, 1; Eleuthera, 2; Caicos, 17; Inagua, 5; Jamaica, 4; Old Providence, 1; Haiti, 14; Santo Domingo, 9; Bahama, 1; Mona, 1).

**\**Dendroica auduboni auduboni* (Townsend).<sup>1</sup> AUDUBON'S WARBLER.**

*Sylvia auduboni* Townsend, Journ. Acad. Nat. Sci. Phila., 7, p. 191, 1837—"forests of the Columbia River"—Fort Vancouver, Washington (type in the Academy of Natural Sciences, Philadelphia; cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 14, 1899).

*Dendroeca auduboni* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 315, 650, 1885 (part).

*Dendroica auduboni auduboni* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 551, 1902 (monog., full bibliog.); Oberholser, Ohio Journ. Sci., 21, p. 240, 1921 (monog.).

(?) *Dendroica auduboni memorabilis* Oberholser, Ohio Journ. Sci., 21, p. 243, 1921—Ward, Boulder County, Colorado (type in U. S. National Museum); Grinnell, Univ. Calif. Pub. Zool., 32, p. 201, 1928—Lower California (winter visitant); van Rossem, Trans. San Diego Soc. N. H., 6, p. 284, 1931—San Javier, Sonora; Griscom, Bull. Amer. Mus. N. H., 64, p. 330, 1932—Guatemala (crit.).

**Range.**—North America from central British Columbia, central Alberta, and western Saskatchewan south to the mountains of southern California, Arizona, and southeastern New Mexico, and

<sup>1</sup> Audubon's Warbler looks so much like *D. coronata* that one is tempted to assume conspecific relationship. Their breeding ranges, however, seem to overlap partly.

east to South Dakota (Black Hills) and western Nebraska;<sup>1</sup> winters from northern California and the Rio Grande to Guatemala; accidental in Minnesota, Pennsylvania, and Massachusetts.

69: British Columbia (Okanagan, 8); Oregon (Mulino, 1); California (Buford, 1; Carmel, Monterey County, 1; Clipper Gap, Placer County, 2; Eagle Lake, 1; Haywards, 4; San Mateo County, 1; Cienega, Los Angeles County, 1; Los Gatos, 1; near Monrovia, 1; Monterey, 5; Oakland, 1; Pasadena, 2; Palo Alto, 3; San Bernardino Mountains, 3; San Bruno, 2; near Sierra, Los Angeles County, 1; Trinity Center, 1); Colorado (Colorado Springs, 1; Fort Lyon, 6; Hot Sulphur Springs, 1; unspecified, 1); New Mexico (Mimbres, 8); Arizona (Calabasas, 1; Fort Huachuca, 1; Fort Verde, 1; Logan, 1; Tucson, 1); Texas (El Paso, 4); Mexico (Lower California, Escanaba, 1; Iguala, Guerrero, 2).

**\**Dendroica auduboni nigrifrons* Brewster. BLACK-FRONTED WARBLER.**

*Dendroica nigrifrons* Brewster, Auk, 6, p. 94, 1889—Pinos Altos, Chihuahua, Mexico (cotypes in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 358, 1930); Allen, Auk, 9, p. 207, pl. 1, 1892; Loomis, l.c., 18, p. 109, 1901—Huachuca and Chiricahua Mountains, Arizona.

*Dendroica auduboni nigrifrons* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 555, 1902 (monog.); Oberholser, Ohio Journ. Sci., 21, p. 246, 1921—southern Arizona and northwestern Mexico (monog.); Griscom, Bull. Amer. Mus. N. H., 64, p. 331, 1932—Momostenango and Chichicastenango, Guatemala (crit.).

(?) *Dendroica goldmani* Nelson, Auk, 14, p. 66, 1897—Hacienda Charcol, Guatemala (type in U. S. National Museum).

(?) *Dendroica auduboni goldmani* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 556, 1902 (monog.); Oberholser, Ohio Journ. Sci., 21, p. 247, 1921 (crit.); Griscom, Bull. Amer. Mus. N. H., 64, p. 331, 1932 (crit.).

**Range.**—Southeastern Arizona (Huachuca and Chiricahua Mountains) south to the mountains of Chihuahua and Durango in northwestern Mexico; winters in western Guatemala.<sup>2</sup>

<sup>1</sup> Oberholser separates the Rocky Mountain race as *D. a. memorabilis* on account of larger size and greater extent of black on under parts and sides of the head. Its breeding range is given as reaching from Saskatchewan and Alberta to Arizona and Texas. While Grinnell and Griscom are inclined to admit its distinctness, the form is not recognized by the latest edition of the A. O. U. Check List, and evidently requires further study.

<sup>2</sup> As pointed out by Griscom (l.c.), this race probably requires subdivision. Birds from Arizona are likely to constitute a distinct form, while the unique type of *D. goldmani* obtained in January in western Guatemala is almost certainly a migrant of typical *nigrifrons*, from northwestern Mexico.



19: Arizona (Catalina Mountains, 2; Huachuca Mountains, 1); Mexico (Chihuahua Mountains, 15; Pacheco, 1).

**\*Dendroica nigrescens (Townsend). BLACK-THROATED GRAY WARBLER.**

*Sylvia nigrescens* Townsend, Journ. Acad. Nat. Sci. Phila., 7, p. 191, 1837—no locality stated (type from vicinity of Columbia River [=near Fort William, Oregon] in U. S. National Museum).

*Sylvia tristis* Nuttall, Man. Orn. U. S. and Canada, 2nd ed., 1, p. 472 (in text), 1840—estuary of the "Wahlamet" [=Willamette River], Oregon (no type extant, described from field observation).

*Sylvia halseii* Giraud, Descr. Sixteen New Spec. N. Amér. Bds., p. [13], pl. [3]—no locality stated (type in U. S. National Museum).

*Dendroica nigrescens* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 291, 646, 1885 (monog.).

*Dendroica nigrescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 556, 1902 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 210, 1928—Lower California.

*Range*.—North America, from southern British Columbia, Nevada, northern Utah, and northwestern Colorado south to northern Lower California, southern Arizona, and southern New Mexico;<sup>1</sup> winters in southern Lower California and in Mexico, from Durango to Michoacan, Vera Cruz, and Oaxaca; accidental in Massachusetts.

33: Oregon (Logan, 2; near Salem, 1); Arizona (Chiricahua Mountains, 1; Santa Rita Mountains, 1; Huachuca Mountains, 10; Whetstone Mountains, 2); California (Alhambra, 1; Calito, 2; Drytown, 1; Fyffe, 1; Piute Mountains, Kern County, 2; Sweetwater, 3; Willow Creek Valley, 1); Mexico (Lower California, El Oreo, 1; El Carmen, 1; Iguala, Guerrero, 1; Sonora, 2).

**\*Dendroica townsendi (Townsend). TOWNSEND'S WARBLER.**

*Sylvia townsendi* (Nuttall MS.) Townsend, Journ. Acad. Nat. Sci. Phila., 7, p. 191, 1837—"forests of the Columbia River" [=Fort Vancouver, Washington] (type in U. S. National Museum).

*Dendroica townsendi* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 299, 647, 1885 (monog.); Salvin and Godman, Ibis, 1892, p. 325—Matagalpa, Nicaragua.

*Dendroica townsendi* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 559, 1902 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 202, 1928—Lower California; Griscom, Bull. Amer. Mus. N. H., 64, p. 334, 1932—Guatemala.

<sup>1</sup> Oberholser (Sci. Pub. Cleveland Mus. N. H., 1, p. 101, 1930) lately revived the name *D. n. halseii* for the breeding form of Arizona, which is stated to be distinguishable by larger size and greater extent of white on the second and third rectrices (from the outside).

*Range*.—Western North America from Prince William Sound and the upper Yukon, Alaska, south to Washington and east to southwestern Alberta and western Montana; winters from central California to Nicaragua; in migration east to eastern Wyoming, western Nebraska, eastern Colorado, and western Texas; accidental in Pennsylvania.

38: Colorado (Fort Lyon, 1); California (Little Bear Valley, San Bernardino Mountains, 1; Mendocino County, 1; Monterey, 19; Mulberry, 1; Nicasio, 1; Pacific Grove, 1; Palm Springs, 1); Arizona (Calabasas, 1; Huachuca Mountains, 4); New Mexico (Mimbres, 1); Guatemala (Dueñas, 1; Tecpam, 4; Volcan de Fuego, 1).

**\**Dendroica virens virens* (Gmelin).<sup>1</sup> BLACK-THROATED GREEN WARBLER.**

*Motacilla virens* Gmelin, Syst. Nat., 1, (2), p. 985, 1789—based on "The Black-throated Green Fly-catcher" Edwards, Glean. Nat. Hist., 2, p. 190, pl. 300, upper fig.; Pennsylvania.

*Dendroeca virens* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 297, 647, 1885 (monog.); Winge, Medd. Grønland, 21, p. 279, 1899—Julianehaab, Greenland.

*Dendroica virens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 562, 1902—part, excl. Pickens County, South Carolina (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Watlings Island; Todd, Ann. Carnegie Mus., 10, p. 267, 1910—Isle of Pines.

*Dendroica virens virens* Barbour, Mem. Nutt. Orn. Cl., 6, p. 117, 1923—Isle of Pines and Cuba (Pan de Matanzas and Pinar del Rio); Todd, Auk, 33, p. 282, 1925—Adjuntas, Porto Rico (April 5, 1912); Todd and Carriker, Ann. Carnegie Mus., 14, p. 452, 1922—Cincinnati, Colombia (April 12); Griscom, Bull. Amer. Mus. N. H., 64, p. 334, 1932—Guatemala; Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 35, 1932—Ile à Vache, Hispaniola.

*Range*.—Eastern North America from Alberta, southern Manitoba, central Ontario and Quebec, and Newfoundland south to Minnesota, Wisconsin, Ohio, New Jersey, Connecticut, and New York (Long Island), and in the Alleghenies south to northern South Carolina, northern Georgia, and northern Alabama; winters in Mexico (Nuevo Leon to Chiapas and Yucatan), Guatemala, Costa Rica, and Panama; occasional in the Bahamas (Watlings Island), West Indies (Cuba, Isle of Pines, Jamaica, Porto Rico, Hispaniola, Dominica, Guadeloupe), the Florida keys, and Colombia (Cincinnati, Santa Marta, Apr. 12); accidental in Colorado, Cali-

<sup>1</sup> A possible synonym is *Sylvia montana* Wilson (Amer. Orn., 5, p. 113, pl. 44, fig. 2, 1812), described from a single male obtained near the Blue Mountains, Virginia. The species, of which the type does not seem to have been preserved, has never been satisfactorily identified with any known North American bird.

fornia (Farallon Islands), Arizona, Greenland (Julianehaab), and Europe (Heligoland).

69: Massachusetts (Cambridge, 1; Cliftondale, 2; Dedham, 1; Dighton, 1; Wakefield, 1; Malden, 1; unspecified, 1); New York (Batavia, 1); Virginia (Falls Church, 1); Indiana (Bluffton, 2); Illinois (Calumet, 1; Chicago, 3; Deerfield, 3; Fox Lake, 1; Grand Chain, 1; Hegewisch, 1; Henry, 3; Joliet, 4; Lake Forest, 4; Ravinia, 1); Wisconsin (Beaver Dam, 10; Woodruff, Vilas County, 4); Mississippi (Holly Springs, 2); Texas (Corpus Christi, 1; unspecified, 1); Mexico (Misantla, 1; Vera Cruz, 1; Tampico, Tamaulipas, 5; Yucatan, Mérida, 1; Yucatan, Cozumel Island, 1); Guatemala (El Rancho, Zacapa, 1; Lake Amatitlan, 1; Lake Atitlan, 2); Costa Rica (Volcan Turrialba, 3); Bahama Islands (Watlings, 1).

***Dendroica virens waynei* Bangs.<sup>1</sup> WAYNE'S WARBLER.**

*Dendroica virens waynei* Bangs, Proc. New Engl. Zool. Cl., 6, p. 94, Oct., 1918—near Mount Pleasant, South Carolina (type in Museum of Comparative Zoology, Cambridge, Mass.); Wayne, Auk, 36, p. 489, 1919—near Mount Pleasant (descr. nest and eggs); Sprunt, Auk, 49, p. 238, 1932—South Carolina (summer resident from March to July); idem, l.c., 49, p. 364, 1932—Rhett Lake, Georgia (Apr. 15); Murray, l.c., 49, p. 487, 1932—Dismal Swamp, Virginia (breeding).

*Dendroica virens* (not *Motacilla virens* Gmelin) Loomis, Auk, 7, p. 128, 1890—Pickens County, South Carolina; idem, Auk, 8, p. 331, 1891—Middle Saluda and Mather's Creek, South Carolina; Wayne, Auk, 35, p. 441, 1918—coast of South Carolina.

**Range.**—Atlantic coast district of South Carolina, North Carolina, and southeastern Virginia (Dismal Swamp); in migration in Georgia (Rhett Lake; Apr. 15); winter home unknown.

**\**Dendroica chrysoparia* Sclater and Salvin. GOLDEN-CHEEKED WARBLER.**

*Dendroica chrysoparia* Sclater and Salvin, Proc. Zool. Soc. Lond., 28, p. 298, 1860—Vera Paz, Guatemala (type from Tactic in Salvin-Godman Collection, now in British Museum); idem, Ibis, 1860, p. 273—Tactic, Guatemala; Salvin, Orn. Misc., 1, p. 181, pl. 23, 1876; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 295, 647, 1885—Tactic (monog.); Salvin and Godman, Ibis, 1892, p. 325—Matagalpa, Nicaragua.

*Dendroica chrysoparia* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 565, 1902 (monog., full bibliog.); Phillips, Auk, 28, p. 86, 1911—Galindo,

<sup>1</sup> *Dendroica virens waynei* Bangs: "Similar to *D. v. virens*, but duller in general coloration, the black throat patch rather more restricted, especially on sides of breast and chest; breast and belly whiter, much less suffused with yellowish; upper parts duller, less yellowish olive green; wing bands slightly duller whitish and slightly narrower; sides of head paler yellow; size about the same; bill very small. Wing (males), 61–65; tail, 45–47; bill, 8½–9." (Bangs, l.c.).

Tamaulipas (March); Griscom, Bull. Amer. Mus. N. H., 64, p. 334, 1932—Guatemala.

*Range*.—Southwestern United States, in State of Texas (from Tom Green to Bosque and Bexar counties); winters in the highlands of southern Mexico, Guatemala, and northern Nicaragua.

7: Texas (Ingram, Kerr County, 6; San Antonio, 1).

**\*Dendroica occidentalis (Townsend). HERMIT WARBLER.**

*Sylvia occidentalis* Townsend, Journ. Acad. Nat. Sci. Phila., 7, p. 190, 1837—"the forests of the Columbia River"—Fort Vancouver, Washington (type in U. S. National Museum).

*Dendroeca niveiventris* Salvin, Proc. Zool. Soc. Lond., 1863, p. 187, pl. 24, fig. 2—Volcan de Fuego, near San Gerónimo, and near Alotepeque, Guatemala (type, from near San Gerónimo, in Salvin-Godman Collection, now in British Museum).

*Dendroeca occidentalis* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 138, 1881—North America south to Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 293, 647, 1885 (monog.); Salvin and Godman, Ibis, 1892, p. 325—Matagalpa, Nicaragua.

*Dendroica occidentalis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 567, 1902 (monog., full bibliog.); Grinnell, Univ. Calif. Pub. Zool., 32, p. 202, 1928—Lower California; Griscom, Bull. Amer. Mus. N. H., 64, p. 334, 1932—Guatemala.

*Range*.—Western North America in the Rocky Mountains from Prince William Sound and the upper Yukon, Alaska, south to Washington, and east to southwestern Alberta and western Montana; winters from California to northern Nicaragua; in migration east to eastern Wyoming, western Nebraska, eastern Colorado, and western Texas; accidental in Pennsylvania.

11: Arizona (Huachuca Mountains, 3); California (Alhambra, 2; Blue Cañon, 1; Fyffe, 1; Sierra City, 1; Vade, 1); Mexico (Coyotes, Durango, 2).

**\*Dendroica cerulea (Wilson). CERULEAN WARBLER.**

*Sylvia cerulea* Wilson, Amer. Orn., 2, p. 141, pl. 17, fig. 5, 1810—Pennsylvania (type in Peale's Museum, doubtless lost;=adult male).

*Sylvia rara* Wilson, Amer. Orn., 3, p. 119, pl. 27, fig. 2, 1811—banks of the Cumberland River (type in Peale's Museum, doubtless lost;=female).

*Sylvia azurea* Stephens, in Shaw, Gen. Zool., 10, (2), p. 653, 1817—substitute for *Sylvia cerulea* Wilson.

*Sylvia populorum* Vieillot, Tabl. Enc. Méth., Orn., livr. 89, p. 449, 1820—new name for *Sylvia cerulea* Wilson.

*Sylvia bifasciata* Say, in Long's Exp. Rocky Mts., 1, p. 170, 1823—Council Bluffs, Iowa (type deposited in Peale's Museum, probably lost).

*Dendroeca caerulea* Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—Medellin, Colombia; idem, l.c., p. 594—Nairapi and Tilotilo, Bolivia; Taczanowski, Orn. Pér., 1, p. 465, 1884—Peru (Monterico, Amable Maria, Ropaybamba, Huambo, Pumamarca); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 327, 651, 1885 (monog.).

*Dendroeca caerulea* Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Cay Lobos, Bahamas; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 46, 1912—Las Quiguas, Carabobo, Venezuela (Feb. 22); Chapman, Bull. Amer. Mus. N. H., 36, p. 545, 1917—Buena Vista, Colombia.

*Dendroeca cerulea* Carriker, Ann. Carnegie Mus., 6, p. 811, 1910—Carrillo, Costa Rica; Barbour, Mem. Nutt. Orn. Cl., 6, p. 117, 1923—Cuba (Camarica); Chapman, Bull. Amer. Mus. N. H., 55, p. 594, 1926—Ecuador (Rio Suno, below San José, lower Sumaco, and below Oyacachi); Grinnell, Univ. Calif. Pub. Zool., 28, p. 201, 1928—Lower California (La Grulla, Sierra San Pedro Mártir); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 425, 1930—Peru (Huachipa and Rio Colorado, Chanchamayo); Griscom, Bull. Amer. Mus. N. H., 64, p. 332, 1932—Guatemala; Bangs and Griscom, Proc. New Engl. Zool. Cl., 13, p. 51, 1932—San José, Costa Rica.

*Dendroeca rara* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 570, 1902 (monog., full bibliog.); Berlepsch and Stolzmann, Ornith., 13, pp. 74, 106, 1906—Idma and Huaynapata, Peru.

**Range.**—Eastern North America from southeastern Nebraska and Minnesota, southern Michigan, Wisconsin, and Ontario, western New York and Pennsylvania, and West Virginia south to north-eastern Texas, Louisiana, Alabama, and northern Georgia, and locally in the Hudson Valley, western North Carolina and Virginia, eastern Maryland, and Delaware; winters in western Venezuela (in states of Carabobo, Mérida, etc.), eastern Colombia, eastern Ecuador, eastern Peru, and northeastern Bolivia (Nairapi, Tilotilo), and sparingly in Central America; casual in Lower California, New Mexico, Colorado, New England, New Jersey, Pennsylvania, Manitoba, Cuba, and the Bahamas (Cay Lobos).

46: New York (Junius, Seneca County, 2; Moravia, 1; Rochester, 1; Sennett, 3); Indiana (Knox County, 1); Illinois (Grand Chain, 9; Mound City, 13; Mount Carmel, 1; Olive Branch, 1); Wisconsin (Beaver Dam, 1); Missouri (Cliff Cave, 1; Dunklin County, 1); Virginia (Charleston, 1); Florida (Key West, 2); Texas (Corpus Christi, 1); West Indies (Grand Cayman, 1); Colombia ("Bogotá," 1); Peru (Chanchamayo, Rio Colorado, 2; Huachipa, 3).

**\**Dendroeca fusca* (P. L. S. Müller). BLACKBURNIAN WARBLER.**

*Motacilla fusca* P. L. S. Müller, Natursyst., Suppl., p. 175, 1776—based on "Figuier étranger" Daubenton, Pl. Enl., pl. 58, fig. 3; "Guyane"—French Guiana.

*Motacilla aurantia* Boddaert, Tabl. Pl. Enl., p. 4, 1783—based on "Figuier étranger" Daubenton, Pl. Enl., pl. 58, fig. 3, and "Figuier orangé" Buffon, Hist. Nat., 9, p. 461; "Guyane"=French Guiana.

*Motacilla chrysocephala* Gmelin, Syst. Nat., 1, (2), p. 971, 1789—same basis.

(?) *Motacilla incana* Gmelin, Syst. Nat., 1, (2), p. 976, 1789—based on "Grey-poll Warbler" Pennant, Arct. Zool., 2, p. 402; New York.

*Motacilla blackburniae* Gmelin, Syst. Nat., 1, (2), p. 977, 1789—based on "Blackburnian Warbler" Pennant, Arct. Zool., 2, p. 412; New York.

*Sylvia parus* Wilson, Amer. Orn., 5, p. 114, pl. 44, fig. 2, 1812—Great Pine swamp, Pennsylvania (location of type not stated, doubtless lost).

*Sylvia melanorhoa* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 180, 1817—"Martinique" (location of type not stated).

*Sylvicola parus* Jardine, Ann. Mag. Nat. Hist., 19, p. 83, 1847—Tobago (one specimen).

*Dendroica blackburniae* Taczanowski, Orn. Pér., 1, p. 464, 1884—Peru (Auquimarca, Tambillo, Huambo); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 288, 646, 1885 (monog.).

*Dendroica blackburniae* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 574, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—New Providence and Watlings Island.

*Dendroica fusca* Berlepsch, Nov. Zool., 15, p. 315, 1908 (nomencl.); Chapman, Bull. Amer. Mus. N. H., 36, p. 545, 1917—Colombia (many localities); Todd and Carrier, Ann. Carnegie Mus., 14, p. 451, 1922—Las Nubes, Las Taguas, Cincinnati, Pueblo Viejo, and Chirua, Colombia; Chapman, Bull. Amer. Mus. N. H., 55, p. 594, 1926—Ecuador (Punta Santa Ana, Guayaba, Sabanilla, Tambillo, Zuna, Sumaco, Baeza, below Oyacachi, Tumbaco); Griscom, l.c., 64, p. 333, 1932—Guatemala (Chimoxan, Panajachel, Finca Sepacuite); Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 73, 1928—Pilon and Aluguincho, Ecuador.

**Range.**—North America from Manitoba, Ontario, Quebec, and Cape Breton Island to Minnesota, Wisconsin, Michigan, Massachusetts, and Connecticut, and in the Alleghenies from Pennsylvania to Georgia and South Carolina; winters from western Venezuela (Mérida) and Colombia to eastern Peru; occasional in the Bahamas (New Providence, Watlings Island), Tobago (one record), Martinique (?), and French Guiana (?).<sup>1</sup>

88: Maine (Brewer, 1; Upton, 7); Massachusetts (Grantville, 1); Connecticut (East Hartford, 3; Suffield, 1); New York (Hastings, 1; Meridian, 1; Peterboro, 1; Sennett, 2; Shelter Island, 1); New Jersey (Englewood, 4; Fort Lee, 1); Michigan (Franklin County, 1); Indiana (Bluffton, 1); Illinois (Chicago, 4; Deerfield, 2; Fox Lake, 1; Hegevisch, 1; Henry, 5; Joliet, 3; Lake Forest, 1; Lake George, 1; Palos,

<sup>1</sup> The reported occurrence in Greenland (Frederikshaab, Oct. 16, 1845) is open to doubt. Cf. Winge, Medd. Grønland, 21, p. 316, 1899.

1; River Forest, 2); Wisconsin (Beaver Dam, 10; Woodruff, Vilas County, 4); North Carolina (Buncombe County, 1; Raleigh, 1); Florida (Key West, 3); Texas (Brownsville, 1; Corpus Christi, 1); West Indies (Grand Cayman, 1; Watlings, 2); Costa Rica (Coliblanco, 1; Guayábo, 5); Colombia ("Bogotá," 4); Venezuela (Páramo de Tamá, 2); Peru (Chinchao, 4; Huachipa, 1).

**\*Dendroica dominica dominica (Linnaeus). YELLOW-THROATED WARBLER.**

*Motacilla dominica* Linnaeus, Syst. Nat., 12th ed., 1, p. 334, 1766—based chiefly on "Figuier cendré de Saint-Domingue" Brisson, Orn., 3, p. 520, pl. 27, fig. 3; "Jamaica, Dominica"—Santo Domingo (ex Brisson).

*Motacilla superciliosa* Boddaert, Tabl. Pl. Enl., p. 43, 1783—based on "La Gorge-jaune de St. Domingue" Daubenton, Pl. Enl., pl. 686, fig. 1; Santo Domingo.

*Motacilla flavicollis* Gmelin, Syst. Nat., 1, (2), p. 959, 1789—based on "Yellow-throated Creeper" Catesby, Nat. Hist. Carolina, 1, p. 62, pl. 62; Carolina.

*Motacilla pensilis* Gmelin, Syst. Nat., 1, (2), p. 960, 1789—based on Daubenton, Pl. Enl., pl. 686, fig. 1; Santo Domingo.

*Dendroeca dominica* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 301, 648, 1885 (part); Nicoll, Ibis, 1904, p. 571—Montserrat.

*Dendroica dominica dominica* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 578, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Great Bahama, Abaco, Bimini, Berry Islands, New Providence, Andros, Cay Lobos, Watlings Island, Mariguana, and Great Inagua ("resident" and migratory); Todd, Ann. Carnegie Mus., 10, p. 266, 1916—Los Indios, Isle of Pines; idem, l.c., 7, p. 433, 1911—New Providence (Blue Hills) (crit.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 116, 1923—Cuba; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 514, 1927—Porto Rico (winter); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 381, 1931—Hispaniola.

**Range.**—Southeastern United States from southern Maryland, Delaware, and southern New Jersey to middle Florida; winters in southern Florida, the Bahamas, and the Greater Antilles, casually north to Georgia, South Carolina, and in the Lesser Antilles (Montserrat); casual in New York, Massachusetts, and Connecticut.

96: Massachusetts (unspecified, 1); Indiana (Brookville, 1); North Carolina (Raleigh, 5); South Carolina (Charleston, 3); Florida (East Pass, 3; Gainesville, 5; Key West, 2; Mary Esther, 6; mouth of Banana River, 1; Nassau County, 3; Town Point, Santa Rosa County, 7; West County, 2); Texas (Giddings, 1; unspecified, 1); Yucatan (Holbox Island, 1); West Indies (Great Bahama, 4; Bimini, 4; Andros, 2; Nassau, New Providence, 4; Eleuthera, 4; Watlings, 7;

Mariguana, 1; Inagua, 3; Cuba, 1; Grand Cayman, 6; Little Cayman, 2; Jamaica, 13; Santo Domingo, 3).

**\*Dendroica dominica albilora** Ridgway. SYCAMORE WARBLER.

*Dendroica dominica* var. *albilora* (Baird MS.) Ridgway, Amer. Natur., 7, p. 606, Oct., 1873—Belize, British Honduras (type in U. S. National Museum).

*Dendroica dominica* (not *Motacilla dominica* Linnaeus) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 134, 1881—part, Mexico, Guatemala, and British Honduras; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 301, 648, 1885 (part); Salvin, Ibis, 1888, p. 250—Holbox, Mugeris, Cozumel, Ruatan, and Boracca Islands.

*Dendroica dominica albilora* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 582, 1902 (monog., full bibliog.); Cole, Bull. Mus. Comp. Zool., 50, p. 139, 1906—Chichen Itza, Yucatan; Carriker, Ann. Carnegie Mus., 6, p. 810, 1910—San José, Costa Rica (Sept. 17); Phillips, Auk, 28, p. 86, 1911—Guiaves, Tamaulipas (crit.); Peters, Auk, 30, p. 378, 1913—Xcopen, Quintana Roo; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Xcaret, Yucatan; Peters, Bull. Mus. Comp. Zool., 69, p. 463, 1929—Lancetilla, Honduras; Griscom, Bull. Amer. Mus. N. H., 64, p. 333, 1932—La Montañita, Guatemala; Bangs and Griscom, Proc. New Engl. Zool. Cl., 13, p. 51, 1932—Cartago, Costa Rica.

*Range*.—Middle United States in the Mississippi Valley from southeastern Nebraska, southern Wisconsin and Michigan, Ohio, West Virginia, and western North Carolina south to Texas and Louisiana; winters in southern Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, and sparingly in the lower Rio Grande Valley; accidental in Connecticut and South Carolina.

3: Texas (Corpus Christi, 1); Mexico (Tampico, 2).

**\*Dendroica dominica flavescens** Todd.<sup>1</sup> ABACO WARBLER.

*Dendroica flavescens* Todd, Proc. Biol. Soc. Wash., 22, p. 171, 1909—Spencer's Point, Abaco, Bahama Islands (type in coll. of W. W. Worthington, now in Carnegie Museum; cf. Todd, Ann. Carnegie Mus., 18, p. 359, 1928); Todd and Worthington, Ann. Carnegie Mus., 7, pp. 434, 461, 1911—Abaco (Spencer's Point and Sand Bank).

*Dendroica dominica flavescens* Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 333, 1930—Abaco (habits).

*Range*.—Island of Abaco, Bahama Islands.

1: Bahamas (Abaco, 1).

<sup>1</sup> *Dendroica dominica flavescens* Todd: Nearest to *D. d. dominica*, but with decidedly longer, slightly decurved bill; breast and abdomen pale yellow instead of white; the yellow color of the throat paler and less orange. Wing, 63–66, (female) 68; tail, 52–54; bill, 16–17.



**\**Dendroica graciae graciae* Baird.<sup>1</sup> GRACE'S WARBLER.**

*Dendroica graciae* Baird, Rev. Amer. Bds., 1, p. 210, 1865—Fort Whipple, near Prescott, Arizona (type in U. S. National Museum).

*Dendroica graciae graciae* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 584, 1902 (monog., full bibliog.).

*Dendroica graciae* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 304, 648, 1885—Arizona, New Mexico, and Mexico (monog.).

*Range*.—Rocky Mountains of southwestern United States in states of Colorado, Arizona, and New Mexico, and the adjoining parts of Mexico (Sonora and Chihuahua); winters in Mexico south to Nayarit, Jalisco, and Michoacan; casual in northern Colorado and western Texas.

16: Arizona (Camp Apache, 1; Huachuca Mountains, 1); Mexico (Chihuahua, 14).

***Dendroica graciae decora* Ridgway. DECORATED WARBLER.**

*Dendroica graciae* var. *decora* Ridgway, Amer. Natur., 7, p. 608, Oct., 1873—Belize, British Honduras (type in U. S. National Museum).

*Dendroica graciae* (not of Baird) Salvin, Ibis, 1873, p. 428—Guatemala; Lawrence, Bull. U. S. Nat. Mus., 4, p. 16, 1876—Zapotitlan, Oaxaca.

*Dendroica decora* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 136, pl. 10, fig. 1, 1881—Mexico (Zapotitlan), British Honduras (Belize), and Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, p. 305, 1885—Guatemala.

*Dendroica decora* Ridgway, Proc. U. S. Nat. Mus., 10, p. 585, 1888—Segovia River, Honduras; Nelson, Auk, 15, p. 159, 1898—Tonalá, Chiapas, and Santo Domingo, Oaxaca.

*Dendroica graciae decora* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 586, 1902—southern Mexico to Honduras (monog.); Bangs and Peters, Bull. Mus. Comp. Zool., 68, p. 400, 1928—Chivelá, Oaxaca (crit.); Griscom, Bull. Amer. Mus. N. H., 64, p. 333, 1932—La Montañita, Guatemala (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 333, 1932—San Juancito, Honduras.

*Range*.—Extreme southern Mexico in states of Oaxaca (Zapotitlan, Santo Domingo, Chivelá) and Chiapas (near Tonalá), Guatemala (Joyabaj, La Montañita), British Honduras (Belize), Honduras (Segovia River, San Juancito), and northern Nicaragua.<sup>2</sup>

**\**Dendroica adelaidae adelaidae* Baird.<sup>3</sup> ADELAIDE'S WARBLER.**

<sup>1</sup> Probably conspecific with *D. dominica*.

<sup>2</sup> Series of breeding birds from different parts of the range should be carefully examined.

<sup>3</sup> Probably conspecific with *D. graciae*.

*Dendroica adelaidae* Baird, Rev. Amer. Bds., 1, p. 212, 1865—Porto Rico (type in U. S. National Museum); Cory, Auk, 3, p. 37, 1886—Porto Rico (descr.); idem, Bds. W. Ind., p. 51, 1889—Porto Rico; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 587, 1902—Porto Rico (monog., full bibliog.); Bowditch, Auk, 20, p. 18, 1903—Porto Rico; Wetmore, Auk, 33, p. 417, 1916—Vieques; idem, Bull. U. S. Dept. Agric., 326, p. 102, 1916—Porto Rico and Vieques (habits, food); Struthers, Auk, 40, p. 476, 1923—Porto Rico; Danforth, Journ. Dept. Agric. Porto Rico, 10, p. 119, 1926—Porto Rico (habits); Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 515, 1927—Porto Rico and Vieques (habits, nest and food).

*Dendroica adelaidae adelaidae* Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 334, 1930 (habits).

*Sylvicola adelaidae* Bryant, Proc. Bost. Soc. N. H., 10, p. 251, 1866—Porto Rico.

*Dendroeca adelaidae* Sundevall, Ofvers. Vetensk.-Akad. Förhandl., 26, pp. 596, 615, 1869—Porto Rico (monog.); Gundlach, Journ. Orn., 26, p. 167, 1878—Porto Rico (habits); idem, Anal. Soc. Esp. Hist. Nat., 7, p. 185, 1878—Porto Rico; Sharpe, Cat. Bds. Brit. Mus., 10, p. 306, 1885—Porto Rico.

*Range*.—Islands of Porto Rico and Vieques, Greater Antilles.

1: Porto Rico (unspecified, 1).

**\**Dendroica adelaidae delicata* Ridgway. SANTA LUCIA WARBLER.**

*Dendroica adelaidae delicata* Ridgway, Proc. U. S. Nat. Mus., 5, p. 525, 1883—Santa Lucia, Lesser Antilles (type in U. S. National Museum); Cory, Auk, 3, p. 37, 1886—Santa Lucia (crit.); idem, Bds. W. Ind., p. 51, 1889 (descr.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 540, 1928—Santa Lucia (habits, nest, and eggs); idem, l.c., 82, p. 334, 1930—Santa Lucia.

*Dendroeca delicata* Ridgway, Proc. U. S. Nat. Mus., 12, p. 129, 1889—Santa Lucia; idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 588, 1902—Santa Lucia (monog., full bibliog.).

*Dendroeca delicata* Sharpe, Cat. Bds. Brit. Mus., 10, p. 307, 1885—Santa Lucia (monog.); Cory, Ibis, 1886, p. 475—Santa Lucia; Selater, Proc. Zool. Soc. Lond., 1889, p. 395—Santa Lucia; Nicoll, Ibis, 1904, p. 559—Santa Lucia.

*Dendroeca adelaidae* (not of Baird) Selater, Proc. Zool. Soc. Lond., 1871, p. 269—Santa Lucia (crit.); Semper, l.c., 1872, p. 649—Santa Lucia (habits); Allen, Bull. Nutt. Orn. Cl., 5, p. 166, 1880—Santa Lucia.

*Range*.—Island of Santa Lucia, Lesser Antilles.

16: Santa Lucia.

***Dendroica adelaidae subita* Riley.<sup>1</sup> BARBUDA WARBLER.**

<sup>1</sup> *Dendroica adelaidae subita* Riley: Nearest to *D. a. adelaidae*, but upper parts duller, mouse gray with the interscapulum hair brown; white wing bars absent or merely suggested by dusky grayish tips; no black edging to the yellow superciliary streak; white markings on lateral rectrices less extensive and not reaching the tip. Wing (male), 51; tail, 46; bill, 11. Four specimens examined.

*Dendroica subita* Riley, Smiths. Misc. Coll., 47, p. 289, 1904—Barbuda (type in U. S. National Museum).

*Dendroica adelaidae subita* Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 334, 1930—Barbuda (crit.).

*Range*.—Island of Barbuda, Lesser Antilles.

**\**Dendroica pensylvanica* (Linnaeus). CHESTNUT-SIDED WARBLER.**

*Motacilla pensylvanica* Linnaeus, Syst. Nat., 12th ed., 1, p. 333, 1766—based on "The Red-throated Flycatcher" Edwards, Glean. Nat. Hist., 2, p. 193, pl. 301; Pennsylvania.

*Motacilla icterocephala* Linnaeus, Syst. Nat., 12th ed., 1, p. 334, 1766—based on "Le Figuier à teste jaune de Canada" Brisson, Orn., 3, p. 517, pl. 27, fig. 2; Canada (type in coll. of M. de Réaumur).

*Dendroica pensylvanica* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 285, 645, 1885 (monog.); Winge, Medd. Grønland, 21, p. 280, 1899—Nanortalik, southern Greenland.

*Dendroica pensylvanica* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 589, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—New Providence; Carriker, Ann. Carnegie Mus., 6, p. 809, 1910—Costa Rica (common winter visitor); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 273, 1918—Gatun, Panama; Hallinan, Auk, 41, p. 324, 1924—New Culebra, Panama; Peters, Bull. Mus. Comp. Zool., 71, p. 386, 1931—Panama (Almirante, Boquete trail, Cricamola); Griscom, Bull. Amer. Mus. N. H., 64, p. 332, 1932—Chimoxan, Guatemala (transient).

*Range*.—North America from Saskatchewan, Manitoba, Quebec, Ontario, and Newfoundland south to eastern Nebraska, Illinois, Indiana, northern Ohio and New Jersey, and Rhode Island, and in the Alleghenies to Tennessee and South Carolina, casually in southern Missouri and the Wabash Valley; winters from Nicaragua to Panama; casual in Florida; accidental in California (Mendocino County), Greenland, the Bahamas, and southern Mexico.

102: Maine (New Vineyard, 1); Massachusetts (Cambridge, 1; Cliftondale, 1; Dedham, 1; Natick, 3; unspecified, 1); Rhode Island (Fruit Hill, 2); Connecticut (East Hartford, 21); New York (Auburn, 1; Shelter Island, 1); New Jersey (Englewood, 2); Illinois (Addison, 1; Calumet, 1; Chicago, 7; Deerfield, 8; Fox Lake, 1; Henry, 4; Joliet, 1; Lake Forest, 8; Warsaw, 3); Wisconsin (Beaver Dam, 8; Woodruff, Vilas County, 1); Iowa (Cedar Rapids, 2); North Carolina (Raleigh, 3); Florida (West Jupiter, 1); Mexico (Teapa, Tabasco, 2); Honduras (Ruatán Island, Bay of Honduras, 1); Nicaragua (San Emilio, Lake Nicaragua, 1); Costa Rica (Guayábo, 12; Limón, 1; Puerto Limón, 1).

**\*Dendroica castanea (Wilson). BAY-BREASTED WARBLER.**

*Sylvia castanea* Wilson, Amer. Orn., 2, p. 97, pl. 14, fig. 4, 1810—Pennsylvania (type in Peale's Museum, probably lost).

*Sylvia autumnalis* Wilson, Amer. Orn., 3, p. 65, pl. 23, fig. 4, 1811—Pennsylvania (fall transient; location of type not stated).

*Dendroica castanea* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 322, 1861—Panama Railroad; Wyatt, Ibis, 1871, p. 322—Naránjo, Colombia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 494—Remedios, Colombia; Berlepsch, Journ. Orn., 32, p. 282, 1884—Bucaramanga, Colombia; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 320, 650, 1885 (monog.).

*Dendroica castanea* Cassin, Proc. Acad. Nat. Sci. Phila., 1860, p. 193—Turbo and Rio Truando; Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda, Colombia; idem, Auk, 17, p. 367, 1900—Bonda; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 592, 1902 (monog., full bibliog.); Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1091—Nóvita, Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 546, 1917—Colombia (Alto Bonito, Dabeiba, Juntas de Tamaná, Nóvita, Puerto Valdivia, Rio Frio, Honda, Malena); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 274, 1918—Gatun and Two Point, Panama; Todd and Carriker, Ann. Carnegie Mus., 14, p. 451, 1922—Don Diego, Colombia; Bangs and Barbour, Bull. Mus. Comp. Zool., 65, p. 224, 1922—Darien, Panama (Mount Sapo, Rio Esnápe, Jesusito); Hallinan, Auk, 41, p. 324, 1924—New Culebra, Panama; Naumburg, Auk, 43, p. 489, 1926—Panama and Colombia; Griscom, Bull. Mus. Comp. Zool., 69, p. 183, 1929—El Tigre, Rio Cupe, and Cana, Panama; idem, Bull. Amer. Mus. N. H., 64, p. 332, 1932—Guatemala.

*Range*.—North America from Alberta, Manitoba, and Newfoundland south to Maine, the mountains of Vermont and New Hampshire, and the Adirondacks of New York; winters in Panama and Colombia; casual in Montana, South Dakota, Texas, southern Mexico (Tehuantepec City), and Guatemala (one record); accidental in Greenland.

60: Maine (Brewer, 1; New Vineyard, 1; Upton, 6); Massachusetts (Cambridge, 1); Connecticut (East Hartford, 1); New York (Auburn, 1); New Jersey (Englewood, 1); Pennsylvania (Stouchsburg, 1); Indiana (Bluffton, 1); Illinois (Addison, 1; Beach, Lake County, 1; Chicago, 8; Deerfield, 3; Fox Lake, 1; Hegewisch, 1; Henry, 7; Lake Forest, 4; Palos, 2; Robey, 1); Wisconsin (Beaver Dam, 14); Mississippi (Holly Springs, 1); Colombia (near San José de Cucuta, 1); Venezuela (La Uraca, Tachira, 1).

**\*Dendroica breviunguis (Spix). BLACK-POLL WARBLER.**

*Muscicapa striata* (not *Motacilla striata* Pallas, 1764)<sup>1</sup> Forster, Philos. Trans., 62, art. 29 (read June 18 and 25), pp. 406, 428, 1772—Severn River—Fort Severn, west coast of Hudson Bay (location of type unknown).

<sup>1</sup> The use of the name *Muscicapa striata* Forster seems to be barred by *Motacilla striata* Pallas (in Vroeg, Cat. Rais. d'Ois., Adumbr., p. 3, 1764), now referred to the genus *Muscicapa*.

- Alauda (Anthus) brevilinguis* Spix, Av. Spec. Nov. Bras., 1, p. 75, pls. 76–77, fig. 1, 1824—"in provincia Parae" (type lost, formerly in Munich Museum; cf. Hellmayr, Abhandl. Bayr. Akad. Wiss., II. Cl., 22, No. 3, p. 625, 1906).
- Anthus brevilinguis* Sclater, Cat. Coll. Amer. Bds., p. 24, 1862—"Trinidad"; Pelzeln, Orn. Bras., 2, p. 69, 1868—Marabitanas (Rio Negro) and Forte do Rio Branco, Brazil (spec. in Vienna Museum examined).
- Dendroica atricapilla* Landbeck, Arch. Naturg., 30, (1), p. 56, 1864—Collicó, near Valdivia, Chile (type in National Museum, Santiago de Chile; cf. Gigoux and Looser, Bol. Mus. Nac., Santiago, 13, p. 19, 1930); idem, Anal. Univ. Chile, 24, p. 336, 1864—near Valdivia; Philippi, Anal. Mus. Nac. Chile, 15, p. 41, pl. 23, fig. 1, 1902—Chile.
- Dendroeca brevilinguis* Chubb, Bds. Brit. Guiana, 2, p. 405, 1921—Mount Roraima and Caramang River.
- Dendroeca striata* Sclater, Cat. Coll. Amer. Bds., p. 31, 1862—"Bogotá," Jamaica, and Tobago; Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—Mérida, Venezuela; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 325, 650, 1885 (monog.); Salvin, Ibis, 1885, p. 202—Roraima, British Guiana; Fielden, l.c., 1889, p. 482—Barbados; Winge, Medd. Grønland, 21, p. 280, 1899—Godthaab, Greenland; Goodfellow, Ibis, 1901, p. 314—Archidona, Ecuador.
- Dendroica striata* Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda, Colombia; idem, Auk, 13, p. 366, 1900—Bonda; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 595, 1902 (monog., full bibliog.); Berlepsch and Hartert, Nov. Zool., 9, p. 9, 1902—Venezuela (Quiribana de Caicara and Perico, Orinoco; Suapure and La Pricion, Caura); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—New Providence, Cay Lobos, Bird Rock, Anguilla, Watlings Island, Great Inagua; Clark, Proc. Bost. Soc. N. H., 32, p. 294, 1905—Barbados; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 46, 1912—San Esteban, Carabobo, Venezuela; Todd, Ann. Carnegie Mus., 10, p. 265, 1916—Isle of Pines (Caleta Cocodrilos and Los Indios); Chapman, Bull. Amer. Mus. N. H., 36, p. 546, 1917—Rio Frio, Buena Vista, and Villavicencio, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 450, 1922—Bonda, Cautilito, Mamatoco, Punto Caiman, Cincinnati, Dibulla, and Fundación, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 116, 1923—Cuba; Chapman, Bull. Amer. Mus. N. H., 55, p. 595, 1926—Rio Suno and below San José, Ecuador; Darlington, Bull. Mus. Comp. Zool., 71, p. 412, 1931—Rio Frio and Sevilla, Magdalena, Colombia; Chapman, Bull. Amer. Mus. N. H., 63, p. 114, 1931—Roraima and Mount Duida; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 19, p. 44, 1932—Chile (near Valdivia).

*Range.*—Northern North America from the limit of trees in north-western Alaska, northern Mackenzie, Manitoba, and Quebec, and Newfoundland south to British Columbia, Michigan, Maine, and the mountains of New York, Vermont, and New Hampshire; winters in Colombia, eastern Ecuador, Venezuela, Guiana, and Brazil north of the Amazon; migrates through the Bahamas and West Indies;

casual in New Mexico, Colorado, Mexico, Tobago (one record), and Chile (one record from near Valdivia); accidental in Greenland (Godthaab).

184: Labrador (Anatalok Bay, 1; Mami, 1); Maine (Brewer, 1; New Vineyard, 1; Upton, 1); Massachusetts (Brookline, 5; Cambridge, 2; Dighton, 1; Lincoln, 1; Longwood, 1; Woburn, 1; Wilmington, 1; unspecified, 2); Connecticut (East Hartford, 12); New York (Shelter Island, 6; Suffolk County, 1); New Jersey (Englewood, 1); Indiana (Sheffield, 1); Illinois (Beach, Lake County, 1; Chicago, 5; Deerfield, 3; Fox Lake, 13; Grand Chain, 1; Hegewisch, 2; Henry, 1; Joliet, 1; Lake Forest, 9; Lake George, 1; Lyons, 2; Warsaw, 3); Wisconsin (Beaver Dam, 15; Madison, 1); North Dakota (Cannonball River, 1); Missouri (St. Louis, 1); Colorado (Fort Lyon, 2); North Carolina (Raleigh, 4); Florida (Amelia Island, 1; Gainesville, 2; Key West, 6; Nassau County, 3; West Jupiter, 14); West Indies (Watlings, 33; Inagua, 16; Grand Cayman, 2; Porto Rico, 1).

**\**Dendroica pinus pinus* (Wilson). NORTHERN PINE WARBLER.**

*Sylvia pinus* Wilson, Amer. Orn., 3, p. 25, pl. 19, fig. 4, 1811—"pine woods of the southern states"; Georgia accepted as type locality (type in Peale's Museum, doubtless lost); Stone, Auk, 38, p. 280, 1921 (nomencl.).

*Sylvia vigorsii* Audubon, Orn. Biog., 1, p. 153, 1831—Perkioming Creek, eastern Pennsylvania (location of type, if still extant, unknown).

*Dendroeca pinus* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 323, 650, 1885 (monog.).

*Dendroica vigorsii vigorsii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 599, 1902 (monog., full bibliog.; excl. southern Florida).

**Range.**—North America from northern Manitoba and Michigan, southern Ontario and Quebec, and New Brunswick south to Texas and the Gulf states; winters from southern Illinois and the coast of Virginia to Florida, Texas, and Tamaulipas, casually north to Massachusetts; occasional in Bermuda and Prince Edward Island; accidental in Greenland.

54: Massachusetts (Natick, 2; Riverside, 1; Taunton, 1); Connecticut (East Hartford, 8); Illinois (Joliet, 1; Lake Forest, 1); Wisconsin (Beaver Dam, 1; Stevens Point, 1; Woodruff, Vilas County, 2); North Carolina (Raleigh, 8); South Carolina (Aiken, 2; Frogmore, 2); Georgia (Chatham County, 1; McIntosh County, 1); Florida (Nassau County, 2; Alachua County, Gainesville, 1; Palm Beach County, West Jupiter, 11; Lee County, Fort Myers, 1; Enterprise, 1; Cutler, 1); Louisiana (Buras, 1); Texas (Boille, 2; Bowie County, 2).

**\**Dendroica pinus florida* (Maynard).<sup>1</sup> FLORIDA PINE WARBLER.**

*Pinacantor vigorii florida* Maynard, Directory Bds. East. N. Amer., p. 244, 1906—Deep Creek and Enterprise, Florida (cotypes in coll. of C. J. Maynard, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 358, 1930).

*Dendroica pinus florida* Howell, Auk, 47, p. 42, 1930—southern Florida (crit.).

**Range.**—Resident in southern Florida from Volusia, Lake, and Citrus counties to Homestead and Long Pine Key, in the southern Everglades.

38: Florida (Miami, 1; Fort Myers, 1; Gainesville, 2; Mary Esther, 3; New River, 1; Nassau County, 1; Palm Beach, 1; Starke, 1; Lake Worth, 3; West Jupiter, 7; East Pass, 5; Eau Gallie, 2; Town Point, Santa Rosa County, 10).

**\**Dendroica pinus achrustera* Bangs. NASSAU PINE WARBLER.**

*Dendroica bahamensis* (not *Dendroica pityophila bahamensis* Cory, 1891) Maynard, App. Cat. Bds. W. Ind., p. 33, 1899—New Providence, Bahamas (cotypes in coll. of C. J. Maynard, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 359, 1930); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 335, 1930—Bahamas.

*Dendroica achrustera* Bangs, Auk, 17, p. 292, 1900—new name for *D. bahamensis* Maynard, preoccupied.

*Dendroica vigorii abacoensis* Ridgway, Auk, 19, p. 69, 1902—Abaco Island, Bahamas (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 603, 1902 (monog.); Riley, in Shattuck, The Bahama Islands, pp. 354, 366, 1905—Abaco.

*Dendroica pinus* (not *Sylvia pinus* Wilson) Cory, Bds. Bahama Is., p. 69, 1880—Bahamas; Sharpe, Cat. Bds. Brit. Mus., 10, p. 323, 1885—part, Bahamas.

*Dendroica vigorii* (not *Sylvia vigorii* Audubon) Cory, Auk, 3, p. 39, 1886—part, Bahamas; idem, Bds. W. Ind., p. 53, 1889—part, Bahamas; Ridgway, Auk, 8, p. 335, 1891—New Providence; Cory, Auk, 8, pp. 350, 352, 1891—Great Bahama, Abaco, and (?) Cay Sal, Bahamas.

*Dendroica vigorii* Bonhote, Ibis, 1899, p. 509—Nassau, New Providence.

*Dendroica vigorii achrustera* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 602, 1902—New Providence (monog.); Riley, in Shattuck, The Bahama Islands, pp. 354, 366, 1905—New Providence; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 435, 461, 1911—New Providence, Andros, and Abaco (crit., habits).

*Dendroica achrustera* Bonhote, Ibis, 1903, p. 281—New Providence (crit.).

<sup>1</sup> *Dendroica pinus florida* (Maynard): Similar to *D. p. pinus*, but with decidedly longer bill and more yellowish (less greenish) coloration of the head and back. Wing, 69–74, (female) 65–70; tail, 49–56, (female) 49–51; bill, 12½–14, (female) 11½–13.

*Range*.—Bahamas (islands of Great Bahama, Abaco,<sup>1</sup> New Providence, Andros, and Cay Sal).

17: Bahamas (Great Bahama, 2; Abaco, 9; Nassau, New Providence, 5; Cay Sal, 1).

**\**Dendroica pinus chrysoleuca* Griscom.<sup>2</sup> HISPANIOLAN PINE WARBLER.**

*Dendroica pinus chrysoleuca* Griscom, Amer. Mus. Nov., 71, p. 5, 1923—Loma Tina, Dominican Republic (type in the American Museum of Natural History, New York); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 512, 1928—La Selle and Cerca Cabrajal, Haiti; Danforth, Auk, 46, p. 373, 1929—La Vega, Santo Domingo; Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 322, 1929—Loma del Medio; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 375, 1931—Hispaniola (crit., habits).

*Dendroica pinus* (not *Sylvia pinus* Wilson) Cory, Bds. Haiti and S. Dom., p. 33, 1884—La Vega.

*Dendroica vigorsii* (not *Sylvia vigorsii* Audubon) Cory, Auk, 3, p. 39, 1886—part, Santo Domingo; idem, Bds. W. Ind., p. 53, 1889—part, Santo Domingo; Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 365, 1909—Dominican Republic.

*Range*.—Resident in the pine forests of the island of Haiti, Greater Antilles.

9: Haiti (La Vega, Santo Domingo, 9).

**\**Dendroica kirtlandii* (Baird). KIRTLAND'S WARBLER.**

*Sylvicola kirtlandii* Baird, Ann. Lyc. Nat. Hist. N. Y., 5, p. 217, pl. 6, 1852—near Cleveland, Ohio (type in U. S. National Museum).

*Dendroica kirtlandii* Sharpe, Cat. Bds. Brit. Mus., 10, p. 322, 1885 (monog.).

*Dendroica kirtlandii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 603, 1902 (monog., full bibliog.); Wood, Bull. Mich. Orn. Cl., 5, pp. 3-13, 1904—Michigan (breeding habits); Adams, l.c., 5, pp. 14-21, 1904 (migration route); Arnold, Auk, 21, p. 487, 1904—Oscoda County, Michigan (song, nest, and eggs); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Bahamas.

*Range*.—Breeds in Oscoda, Crawford, and Roscommon counties, Michigan; winters in the Bahamas south to the Caicos Islands; in migration recorded casually from Minnesota, Wisconsin, Ontario,

<sup>1</sup> Though birds from Abaco have on average slightly larger bills, this insignificant variation hardly justifies the retention of *abacoensis*, as has been pointed out by Mr. Todd, in whose paper a concise discussion of the characters of *D. p. chrustera* may be found.

<sup>2</sup> *Dendroica pinus chrysoleuca* Griscom: Nearest to *D. p. pinus*, but still more brightly colored; the anterior under parts deeper yellow, the abdomen clearer white; the wing bands somewhat narrower. Wing, 66-72, (female) 65-67; tail, 50-58, (female) 49-52; bill, 11-12.



Ohio, Illinois, Indiana, Missouri, Virginia, South Carolina, Georgia, and Florida.

18: Michigan (Luzerne, 1; Oscoda County, 2); Florida (Jupiter Inlet, 1); Bahama Islands (Abaco, 1; Berry, 1; Nassau, New Providence, 5; Andros, 1; Eleuthera, 5; Caicos, 1).

**\*Dendroica pityophila (Gundlach). CUBAN WARBLER.**

*Sylvicola pityophila* Gundlach, Ann. Lyc. Nat. Hist. N. Y., 6, p. 160, 1855—Cuba (type probably in the Havana Museum).

*Dendroica pityophila bahamensis* Cory, Auk, 8, p. 348, 1891—Abaco Island, Bahamas (type in coll. of C. B. Cory, now in Field Museum); idem, Auk, 8, p. 350, 1891—Great Bahama and Abaco; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 606, 1902—Abaco and Great Bahama (ex Cory); Riley, in Shattuck, The Bahama Islands, pp. 354, 366, 1905—Abaco and Great Bahama.

*Rimamphus pityophilus* Gundlach, Journ. Orn., 5, p. 240, 1857—western Cuba.

*Dendroica pityophila* Baird, Rev. Amer. Bds., 1, p. 208, 1865—Cuba (crit.); Cory, Auk, 3, p. 38, 1886—Cuba (descr.); idem, Bds. W. Ind., p. 52, 1889—Cuba; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 434, 461, 1911—Abaco, Bahamas (crit., habits); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 335, 1930—Cuba and Bahamas (habits).

*Dendroica pityophila* Sharpe, Cat. Bds. Brit. Mus., 10, p. 322, 1885—Cuba.

*Dendroica pityophila pityophila* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 605, 1902 (monog., full bibliog.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 117, 1923—Cuba (distribution).

**Range.**—Cuba, Greater Antilles, and the islands of Abaco and Great Bahama, Bahamas.<sup>1</sup>

7: Bahamas (Great Bahama, 1; Abaco, 3); Cuba (unspecified, 3).

**\*Dendroica discolor discolor (Vieillot). PRAIRIE WARBLER.**

*Sylvia discolor* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 37, pl. 98, "1807" [1808, possibly 1809]—"dans les Etats-Unis et les grandes îles Antilles" (type, from "les Antilles," in coll. of M. Dufresne, now in Edinburgh Museum; cf. Stenhouse, Nov. Zool., 35, p. 271, 1930).

*Sylvia minuta* Wilson, Amer. Orn., 3, p. 87, pl. 25, fig. 4, 1811—barrens of Kentucky (type in Peale's Museum, doubtless lost).

*Dendroica discolor* Sharpe, Cat. Bds. Brit. Mus., 10, pp. 307, 648, 1885 (monog.); Salvin, Ibis, 1888, p. 250—îlands of Muges, Cozumel, and Bonacca.

*Dendroica discolor* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 607, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366,

<sup>1</sup> The Bahama race (*bahamensis*) seems to be inseparable from Cuban birds, as has been shown by Mr. Todd. Still, the examination of a series in fresh plumage might reveal characters not discernible in Cory's original specimens, which are all in worn, faded condition.

1905—Bahama Islands; Todd and Worthington, Ann. Carnegie Mus., 7, pp. 437, 461, 1911—New Providence, Great Inagua, and Watlings Island (crit.); Peters, Bull. Mus. Comp. Zool., 69, p. 138, 1929—Corn Islands.

*Range*.—North America from eastern Nebraska and Kansas, southern Ohio, Pennsylvania, and New Jersey, Massachusetts (along the coast), and New York south to Arkansas, Missouri, northern Mississippi, southern Alabama, Georgia, and the Bahamas, and north locally to Michigan, southern Ontario, and New Hampshire; rare and locally in the Gulf states; winters from central Florida through the Bahamas and West Indies, and casually in islands off the coast of Central America (Swan, Muger, Cozumel, Chinchorro, Bonacca, and Corn).

191: Massachusetts (Grantville, 1); Rhode Island (Fruit Hill, 1); New York (Long Island, 1; Miller Place, 1; Shelter Island, 2); Illinois (Lake Forest, 1); North Carolina (Raleigh, 3); Tennessee (Nashville, 1); Mississippi (Holly Springs, 3); Florida (Gainesville, 5; Nassau County, 4; Orchid, 1; Puntarasa, 1; Pine Island, 1; West Jupiter, 3); West Indies (Great Bahama, 9; Abaco, 3; Bimini, 5; Berry, 3; Andros, 5; Eleuthera, 11; Nassau, New Providence, 5; Cay Sal, 1; Watlings, 25; Mariguana, 9; Caicos, 10; Inagua, 18; Cayman Brac, 6; Little Cayman, 1; Jamaica, 9; Haiti, 3; Santo Domingo, 15; Mona, 1; Porto Rico, 3; St. Croix, 3; Tortola, 2; Virgin Gorda, 9; Anegada, 1; St. Eustatius, 2; St. Kitts, 3).

**\**Dendroica discolor collinsi* Bailey.<sup>1</sup> FLORIDA PRAIRIE WARBLER.**

*Dendroica discolor collinsi* Bailey, Bull. Bailey Mus. Nat. Hist., No. 3, p. [1], Nov. 16, 1926—Dade County, Florida (type in coll. of H. H. Bailey).

*Dendroica discolor paludicola* Howell, Auk, 47, p. 41, 1930—Anclote Key, Florida (type in U. S. National Museum).

*Dendroica discolor* (not *Sylvia discolor* Vieillot) Holt and Sutton, Ann. Carnegie Mus., 16, p. 438, 1926—Bear Lake, East Cape, and Gator Lake.

*Range*.—Mangrove swamps on the coast of Florida from New Smyrna and Anclote Key southward; winters, at least in part, in Florida.

10: Florida (West Jupiter, 6; Palm Beach, 2; Key West, 2).

**\**Dendroica vitellina*<sup>2</sup> *vitellina* Cory. VITELLINE WARBLER.**

<sup>1</sup> *Dendroica discolor collinsi* Bailey: Similar to *D. d. discolor*, but upper parts (especially in females) more grayish (less greenish) and with chestnut markings of the back less pronounced and sometimes even absent; black streaks below on average smaller; bill, tail, and tarsus longer; wing slightly shorter. Wing, 56–59, (female) 52–57; tail, 47–52, (female) 47–50; tarsus, 18–21; bill, 10–11.

<sup>2</sup> *Dendroica vitellina*, while nearly allied to the Prairie Warbler, nevertheless differs markedly in larger size with longer bill, in the absence of the chestnut

*Dendroica vitellina* Cory, Auk, 3, p. 497, 1886—Grand Cayman (type in coll. of C. B. Cory, now in Field Museum); idem, l.c., 3, p. 501, 1886—Grand Cayman; Ridgway, Proc. U. S. Nat. Mus., 10, p. 574, 1888—Grand Cayman; idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 610, 1902—part, Grand Cayman; English, Ibis, 1916, p. 30—Grand Cayman (nest and eggs descr.).

*Dendroica vitellina vitellina* Bangs, Bull. Mus. Comp. Zool., 60, p. 316, 1916—Grand Cayman; idem, l.c., 62, p. 493, 1919—Grand Cayman (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 336, 1930—Grand Cayman (habits).

*Dendroica vitellina* Nicoll, Ibis, 1904, p. 580—Grand Cayman (crit.); Lowe, l.c., 1909, p. 345—Grand Cayman; idem, l.c., 1911, p. 157—part, Grand Cayman.

*Range*.—Grand Cayman Island, Caribbean Sea.

9: Grand Cayman.

**\**Dendroica vitellina nelsoni* Bangs.<sup>1</sup> SWAN ISLAND WARBLER.**

*Dendroica vitellina nelsoni* Bangs, Bull. Mus. Comp. Zool., 62, p. 494, Jan., 1919—Swan Island, Caribbean Sea (type in Museum of Comparative Zoology, Cambridge, Mass.); Fisher and Wetmore, Proc. U. S. Nat. Mus., 79, art. 10, p. 20, 1931—Swan Island.

*Dendroica vitellina* (not of Cory) Ridgway, Proc. U. S. Nat. Mus., 10, p. 576, 1888—Swan Island (descr. juv.); idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 610, 1902—part, Swan Island.

*Dendroica vitellina* Lowe, Ibis, 1909, p. 337—Swan Island (crit.); idem, l.c., 1911, p. 157—part, Swan Island.

*Range*.—Swan Island, Caribbean Sea.

2: Swan Island.

**\**Dendroica vitellina crawfordi* Nicoll.<sup>2</sup> CRAWFORD'S WARBLER.**

spotting on the back, in all the under tail coverts being yellow, and in having the sides of the breast streaked with dusky olive instead of black. Still, the group is possibly conspecific with *D. discolor*.

<sup>1</sup> *Dendroica vitellina nelsoni* Bangs: Similar to *D. v. vitellina*, but sides of breast almost unstreaked or with but faint dusky olive stripes; dark markings on sides of head much more indistinct and not abruptly contrasting with the yellow auriculars and superciliaries; wing bands duller, olive yellow to ecru olive rather than lemon or citron yellow; white areas of lateral rectrices less defined. Wing (males), 56–60; tail, 50–52; bill, 10–11.

This form is restricted to Swan Island. Ridgway's record from St. Andrews, credited to "Cory, Auk, 4, p. 181, 1887," is an erroneous quotation.

Six specimens examined.

<sup>2</sup> *Dendroica vitellina crawfordi* Nicoll: Very similar to *D. v. nelsoni* and agreeing in restriction of dusky olive markings on sides of face and under parts; but upper parts brighter, less greenish, near pyrite yellow, and superciliaries, sides of head, and lower surface more deeply colored, intense lemon chrome. Wing, 56–59; tail, 47–52; bill, 10–11.

Birds from Cayman Brac appear to be identical with those from Little Cayman.

*Dendroeca crawfordi* Nicoll, Bull. Brit. Orn. Cl., 14, p. 95, June, 1904—Little Cayman Island (type in British Museum); idem, Ibis, 1904, p. 586, pl. 11, fig. 1—Little Cayman and Cayman Brac; Lowe, l.c., 1909, p. 337 (in text)—Little Cayman; idem, l.c., 1911, p. 158—Little Cayman.

*Dendroica vitellina crawfordi* Bangs, Bull. Mus. Comp. Zool., 60, p. 316—Little Cayman and Cayman Brac; idem, l.c., 62, p. 494, 1919—same localities (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 336, 1930—Little Cayman and Cayman Brac.

*Dendroica vitellina* (not of Cory, 1886) Cory, Auk, 6, p. 31, 1889—Little Cayman and Cayman Brac.

*Range*.—Little Cayman and Cayman Brac, Caribbean Sea.

34: Cayman Brac, 26; Little Cayman, 8.

**\**Dendroica palmarum palmarum* (Gmelin). WESTERN PALM WARBLER.**

*Motacilla palmarum* Gmelin, Syst. Nat., 1, (2), p. 951, 1789—based on "Le Bimbelé ou La Fausse Linotte" Buffon, Hist. Nat. Gén., 5, p. 330; Santo Domingo.

*Dendroeca ignota* Maynard, Contrib. to Science, 1, p. 30, pl. 3, fig. 1, 1889—Homestead, St. Andrews, Jamaica (type in the Kingston, Jamaica, Museum); Cory, Cat. W. Ind. Bds., p. 123, 1892 (crit.).

*Dendroeca palmarum* Boucard, Proc. Zool. Soc. Lond., 1883, p. 441—Progreso, Yucatan; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 317, 650, 1885 (monog., in part); Salvin, Ibis, 1888, p. 251—Holbox, Mugeris, Cozumel, and Ruatan Islands.

*Dendroica palmarum palmarum* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 612, 1902 (monog., full bibliog.); Cole, Bull. Mus. Comp. Zool., 50, p. 139, 1906—Chichen Itza, Yucatan; Barbour, Mem. Nutt. Orn. Cl., 6, p. 118, 1923—Cuba; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Vigia Chica, Yucatan; idem, l.c., 236, p. 12, 1926—Cozumel Island; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 520, 1927—Porto Rico (rare winter visitant); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 512, 1928—Gonave and Tortuga Islands; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 382, 1931—Hispaniola (common winter visitant).

*Dendroica palmarum* Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Bahamas.

*Range*.—Western North America from southern Mackenzie and northern Manitoba south to northern Minnesota; winters from southern Florida and the Bahamas to the Greater Antilles (east to Porto Rico) and Yucatan; accidental in California, Montana, and Colorado.

197: Massachusetts (Chatham, 1); Illinois (Beach, Lake County, 2; Calumet, 1; Chicago, 7; Deerfield, 4; Glen Ellyn, 1; Grand Chain, 4; Joliet, 4; Lake Forest, 8; Ruby, 1); Wisconsin (Beaver Dam, 15; Milton, 1); Florida (Enterprise, 1; Gainesville, 5; Georgiana, 1; Holly

Hill, 1; Key West, 1; Lake Worth, 3; Mary Esther, 3; Miami, 9; Nassau County, 5; New Berlin, 2; Palm Beach, 3; Pine Island, 1; Puntarasa, 1; Santa Rosa Island, 1; Tamiami Trail, 1; West Jupiter, 2; Wilson, 4); West Indies (Great Bahama, 26; Bimini, 2; Berry, 1; Nassau, New Providence, 2; Andros, 4; Eleuthera, 29; Watlings, 1; Caicos, 4; Inagua, 4; Grand Cayman, 1; Cayman Brac, 5; Jamaica, 12; Old Providence, 1; Santo Domingo, 11; Isle of Pines, La Vega, 1).

**\**Dendroica palmarum hypochrysea* Ridgway. YELLOW PALM WARBLER.**

[*Dendroica palmarum*] subsp. *hypochrysea* Ridgway, Bull. Nutt. Orn. Cl., 1, No. 4, pp. 85, 87, 1876—Atlantic states from east Florida to Nova Scotia (type from Cambridge, Massachusetts, in U. S. National Museum).

*Dendroica palmarum hypochrysea* Cory, Auk, 9, p. 273, 1892—San Diego de los Baños, Cuba; Scott, Auk, 10, p. 341, 1893—Kingston, Jamaica (Dec. 20, 1890; sight record); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 615, 1902 (monog., full bibliog.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 118, 1923—Cuba (ex Cory); Griscom, Ibis, 1926, p. 680—Newfoundland.

*Range*.—Northeastern North America from Ontario, central Quebec, and Newfoundland south to Nova Scotia, New Brunswick, and Maine; winters from Louisiana to Florida, casually in West Virginia, Pennsylvania, and Massachusetts; accidental in Ohio, Cuba (San Diego de los Baños), Jamaica (Kingston, Dec. 20, 1890; sight record), and Bermuda.

36: Maine (Brewer, 1; Lincoln, 1; New Vineyard, 1); Massachusetts (Cliftondale, 1; Great Island, 1; Lincoln, 2; Natick, 1; unspecified, 1); Connecticut (Bridgeport, 1; East Hartford, 4; New Haven, 1); New York (Miller Place, 5; Suffolk County, 1); New Jersey (Fort Lee, 1); North Carolina (Raleigh, 2); Florida (Enterprise, 1; Gainesville, 4; Nassau County, 4; Pilot Town, 1; Starke, 1; Wilson, 1).

**\**Dendroica plumbea plumbea* Lawrence. PLUMBEOUS WARBLER.**

*Dendroica plumbea* Lawrence, Ann. N. Y. Acad. Sci., 1, p. 47, Oct., 1878—Dominica (type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 1, p. 55, 1878—Dominica; idem, l.c., 1, p. 486, 1879—part, Dominica; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 333, 651, 1885—part, spec. a, c, Dominica; Cory, Ibis, 1886, p. 473—Marie Galante; Sclater, Proc. Zool. Soc. Lond., 1889, p. 326—Dominica; Nicoll, Ibis, 1904, p. 568—Dominica.

*Dendroica plumbea* Cory, Auk, 3, p. 40, 1886—part, Dominica; idem, Bds. W. Ind., p. 54, 1889—part, Dominica; Verrill, Trans. Conn. Acad. Arts and Sci., 8, p. 342, 1892—Dominica (habits, nest, and eggs); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 617, 1902—part, Dominica (monog.); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 540, 1928—Dominica (habits);

idem, l.c., 82, p. 337, 1930—part, Dominica and Marie Galante (crit., habits).

*Range*.—Islands of Dominica and Marie Galante, Greater Antilles.  
16: Dominica, 8; Marie Galante, 8.

**\**Dendroica plumbea guadeloupensis* Brodkorb.<sup>1</sup> GUADELOUPE WARBLER.**

*Dendroica plumbea guadeloupensis* Brodkorb, Proc. Biol. Soc. Wash., 44, p. 3, 1931—Guadeloupe (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Dendroica plumbea* (not of Lawrence, 1878) Lawrence, Proc. U. S. Nat. Mus., 1, p. 454, 1879—Guadeloupe; idem, l.c., 1, p. 486, 1879—part, Guadeloupe; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 333, 651, 1885—part, spec. b, d, Guadeloupe; Cory, Ibis, 1886, p. 474—Grande Terre.

*Dendroica plumbea* Cory, Auk, 3, p. 40, 1886—part, Guadeloupe; idem, Bds. W. Ind., p. 54, 1889—part, Guadeloupe; idem, Auk, 8, p. 49, 1891—Guadeloupe; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 617, 1902—part, Guadeloupe; Noble, Bull. Mus. Comp. Zool., 60, p. 390, 1916—Soufrière and above Sainte Claude, Guadeloupe (crit., habits); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 337, 1930—part, Guadeloupe.

*Range*.—Island of Guadeloupe, Greater Antilles.

10: Guadeloupe.

**\**Dendroica pharetra* (Gosse). STREAKED WARBLER.**

*Sylvicola pharetra* Gosse, Bds. Jamaica, p. 163, 1847—top of Bluefields Peak, Jamaica (type in British Museum); idem, Illust. Bds. Jam., pl. 38, 1849.

*Dendroica pharetra* Sclater, Proc. Zool. Soc. Lond., 1861, p. 71—Freeman's Hall, Jamaica (crit.); idem, Cat. Coll. Amer. Bds., p. 358, 1862—same locality; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 332, 651, 1885—Jamaica.

*Dendroica pharetra* Baird, Rev. Amer. Bds., 1, p. 192, 1865—St. Armand and Trelawny, Jamaica (crit.); Cory, Auk, 3, p. 35, 1886—Jamaica (descr.); idem, Bds. W. Ind., p. 49, 1889—Jamaica; Scott, Auk, 10, p. 341, 1893—Bluefields Peak (ex Gosse); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 618, 1902 (monog., full bibliog.); Danforth, Auk, 45, p. 489, 1928—near Lumsden, Jamaica (habits); Bond, Proc. Acad. Nat. Sci. Phila., 82, p. 336, 1930—Jamaica (habits).

*Range*.—Island of Jamaica, Greater Antilles.

4: Jamaica.

<sup>1</sup> *Dendroica plumbea guadeloupensis* Brodkorb: Similar to *D. p. plumbea*, but upper surface of a clearer slate color and the under parts, except the median portion, with more or less defined slate gray streaks instead of uniform slate gray; immature plumage above more yellowish green, the median abdominal area deeper yellow, and the streaks on the flanks more pronounced as well as more greenish, olive green rather than grayish olive. Size about the same.

Though the characters are somewhat variable and do not hold in every single individual, the form as a whole seems recognizable, when series are compared.

Genus **CATHAROPEZA** Sclater

*Catharopeza* Sclater, *Ibis*, (4), 4, pp. 40, 78, 1880—type, by orig. desig.,  
*Leucopeza bishopi* Lawrence.

**Catharopeza bishopi** (Lawrence).<sup>1</sup> BISHOP'S WARBLER.

*Leucopeza bishopi* Lawrence, *Ann. N. Y. Acad. Sci.*, 1, p. 151, 1878—St., Vincent (type in U. S. National Museum); idem, *Proc. U. S. Nat. Mus.*, 1, p. 189, 1878—St. Vincent (habits, notes); Sharpe, *Cat. Bds. Brit. Mus.*, 10, pp. 228, 638, 1885—St. Vincent.

*Catharopeza bishopi* Lister, *Ibis*, 1880, p. 40—St. Vincent; Sclater, *Ibis*, 1880, p. 73, pl. 1—St. Vincent (crit.); Cory, *Auk*, 3, p. 41, 1886—St. Vincent; idem, *Bds. W. Ind.*, p. 55, 1889—St. Vincent; Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 2, p. 620, 1902—St. Vincent (monog.); Clark, *Proc. Bost. Soc. N. H.*, 32, p. 295, 1905—St. Vincent (not observed); Bond, *Proc. Acad. Nat. Sci. Phila.*, 80, p. 540, 1928—southern St. Vincent (habits).

*Range*.—Island of St. Vincent, Lesser Antilles.

Genus **SEIURUS** Swainson

*Seiurus* Swainson, *Phil. Mag.*, (n.s.), 1, No. 5, p. 369, May, 1827—type, by subs. desig. (Swainson, *Zool. Journ.*, 3, p. 171, July, 1827), *Turdus aurocapilla* Wilson=*Motacilla aurocapilla* Linnaeus.

*Siurus* Strickland, *Ann. Mag. Nat. Hist.*, 6, p. 422, 1841 (emendation).

*Enicocichla* Gray, *List Gen. Subgen. Bds.*, p. 22, 1840—new name for *Seiurus* Swainson.

*Henicocichla* Cabanis, *Mus. Hein.*, 1, p. 15, 1851 (emendation of *Enicocichla* Gray).

*Ezochochla* van der Hoeven, *Handb. Zool.*, 2, p. 537, 1852–56—new name for *Seiurus* Swainson.

**\*Seiurus aurocapillus aurocapillus** (Linnaeus). OVEN-BIRD.

*Motacilla aurocapilla* Linnaeus, *Syst. Nat.*, 12th ed., 1, p. 334, 1766—based on "The Golden-crowned Thrush" Edwards, *Glean. Nat. Hist.*, 1, p. 91, pl. 252; "on the coast of Hispaniola, about ten leagues from land."

*Turdus citreus* P. L. S. Müller, *Natursyst.*, Suppl., p. 141, 1776—based on "Petite grive de St. Domingue" Daubenton, *Pl. Enl.*, pl. 398, fig. 2; Santo Domingo.

*Turdus coronatus* Vieillot, *Hist. Nat. Ois. Amér. Sept.*, 2, p. 8, pl. 64, "1807" [=1808?]-center of eastern United States, wintering in Santo Domingo.

*Siurus auricapillus* Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 389, 1885 (monog.).

*Seiurus aurocapillus* Ridgway, *Bull. U. S. Nat. Mus.*, 50, Part 2, p. 635, 1902 (monog., full bibliog.); Naumburg, *Auk*, 43, p. 489, 1926.

<sup>1</sup> This species, for some time regarded as extinct, has recently been rediscovered by James Bond, who found it to be not uncommon in the southern mountains of the island.

*Seiurus aurocapillus aurocapillus* Todd and Carriker, Ann. Carnegie Mus., 6, p. 449, 1922—Bonda, Santa Marta, Colombia.

**Range.**—North America, from southwestern Mackenzie (casually the lower Yukon Valley), northern Ontario, and central Quebec south to southern Alberta, Colorado, Kansas, Arkansas, southern Missouri, northern Alabama, northern Georgia, and eastern North Carolina; winters from northern Florida (casually South Carolina) and islands off the Louisiana coast through the Bahamas and West Indies to St. Thomas, and from Mexico to Colombia (Bonda, Santa Marta; one record).

191: Alberta (Hastings Lake, 1); Massachusetts (Boston, 1; Cambridge, 1; Lincoln, 1; Natick, 1); Connecticut (East Hartford, 27); New York (Cayuga Co., 1; Holly, 1; Rochester, 1; Shelter Is., 1); New Jersey (Fort Lee, 1); Indiana (Dunes, 1); Illinois (Addison, 1; Auburn Park, 1; Beach, Lake Co., 1; Chicago, 2; Deerfield, 4; Glen Ellyn, 1; Grand Chain, 2; Hegewisch, 3; Henry, 4; Joliet, 5; Lake Forest, 3; Lyons, 2; Ravinia, 1); Wisconsin (Beaver Dam, 8); Arkansas (Winslow, 1); Florida (Gainesville, 1; Key West, 1; Nassau Co., 3; West Jupiter, 2); Yucatan (Cozumel Island, 2); Guatemala (Mazatenango, 1); Nicaragua (San Gerónimo, 3; San Rafael del Norte, 1); Costa Rica (Las Cañas, 1); West Indies (Great Bahama, 5; Abaco, 2; Bimini, 1; Berry, 3; Nassau, New Providence, 1; Andros, 1; Eleuthera, 13; Watlings, 11; Caicos, 4; Inagua, 18; Cuba, 1; Cayman Brac, 1; Jamaica, 2; Old Providence, 1; Haiti, 4; Santo Domingo, 26; Porto Rico, 4; St. Croix, 1).

***Seiurus aurocapillus furvior* Batchelder.<sup>1</sup> NEWFOUNDLAND OVEN-BIRD.**

*Seiurus aurocapillus furvior* Batchelder, Proc. New Engl. Zool. Cl., 6, p. 81, 1918—near Deer Pond, Newfoundland (type in coll. of C. F. Batchelder); Noble, Bull. Mus. Comp. Zool., 62, p. 561, 1919—Nicholsville, Romain's Brook, and Spruce Brook (crit.).

*Seiurus aurocapillus* subsp. Griscom, Ibis, 1926, p. 680—west coast of Newfoundland.

**Range.**—Newfoundland.

<sup>1</sup> *Seiurus aurocapillus furvior* Batchelder: "Similar to *S. a. aurocapillus*, but deeper colored; tawny of crown browner, less yellowish—'amber brown' instead of 'ochraceous-orange'; black of sides of crown more extensive and slightly more intense; back duskiest green; dark markings of breast and sides heavier and blacker; brown of flanks deeper." (Batchelder, l.c.).

This form, not admitted in the latest edition of the A. O. U. Check List, is recognized by Noble. We have no material to investigate its value.



**\**Seiurus motacilla* (Vieillot). LOUISIANA WATER-THRUSH.**

*Turdus motacilla* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 9, pl. 65, "1807" [1808?]-Kentucky (type in coll. of P. L. Vieillot, doubtless lost).

*Turdus ludovicianus* Audubon, Orn. Biog., 1, p. 99, 1831—"lowlands of Louisiana and Mississippi" (location of type unknown).

*Henicocichla major* Cabanis, Mus. Hein., 1, p. 16, 1851—Jalapa, Mexico (type in Heine Collection, now in Municipal Museum, Halberstadt).

(?) *Seiurus colombianus* Lesson,<sup>1</sup> Echo du Monde Sav., 11, (2nd sem.), No. 7, p. 157, July 25, 1844—"Colombie" (type in coll. of Dr. Abeillé, Bordeaux).

*Siurus motacilla* Sharpe, Cat. Bds. Brit. Mus., 10, p. 342, 1885 (monog.).

*Seiurus motacilla* Bangs, Proc. Biol. Soc. Wash., 12, p. 143, 1898—Santa Marta, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda, Santa Marta; idem, Auk, 17, p. 366, 1900—Bonda; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 639, 1902 (monog., full bibliog.); Riley, Smiths. Misc. Coll., 47, p. 289, 1904—Antigua; idem, in Shattuck, The Bahama Islands, p. 366, 1905—Biminis, Berry, and Cay Lobos, Bahamas; Carriker, Ann. Carnegie Mus., 6, p. 806, 1910—Costa Rica (Volcan de Irazú, Rio Sicsola, and El Hogar); Todd and Carriker, l.c., 14, p. 448, 1922—San Miguel and Don Diego, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 119, 1923—Cuba; Darlington, Bull. Mus. Comp. Zool., 71, p. 411, 1931—Rio Frio, Magdalena, Colombia.

*Range*.—North America from eastern Nebraska, southeastern Minnesota, and the southern parts of Michigan, Ontario, New York, and New England south to northeastern Texas, southern Alabama, northern Georgia, and central South Carolina; winters from northern Mexico to Colombia (Santa Marta region), the Greater Antilles, St. Kitts, Antigua, and the Bahamas; accidental in California.

49: Canada (Hamilton, Ontario, 1); Michigan (Grand Rapids, 1); Illinois (Grand Chain, 1; Olive Branch, 1); Missouri (Cliff Cave, 1); Arkansas (Winslow, 1); Rhode Island (West Greenwich, 1); Ohio (Garrettsville, 1); West Virginia (Petroleum, 1); South Carolina (Mount Pleasant, 1); Florida (Key West, 19; Nassau County, 1); Texas (Corpus Christi, 2); Mexico (Cuernavaca, 1; Iguala, Guerrero, 1; Vera Cruz, 2); West Indies (Bimini, 1; Berry, 1; Grand Cayman, 1; Cayman Brac, 1; Jamaica, 1; Old Providence, 2; Haiti, 1; Santo Domingo, 4; St. Kitts, 1).

**\**Seiurus noveboracensis noveboracensis* (Vieillot). WATER-THRUSH.**

*Motacilla naevia* (not of Boddaert, Tabl. Pl. Enl., p. 35) Boddaert, Tabl. Pl. Enl., p. 47, 1783—based on "Fauvette tachetée, de la Louisiane" Daubenton, Pl. Enl., pl. 752, fig. 1.

<sup>1</sup> Lesson's description is rather ambiguous. Certain characters seem to apply better to *S. motacilla*, while others rather point to one of the races of *S. noveboracensis*.

*Motacilla noveboracensis* Gmelin, Syst. Nat., 1, (2), p. 958, 1789—based on Daubenton, Pl. Enl., pl. 752, fig. 1, and "New York Warbler" Pennant (Arct. Zool., 2, p. 409) and Latham (Gen. Syn. Bds., 2, (2), p. 958); New York accepted as type locality.

*Turdus aquaticus* Wilson, Amer. Orn., 3, p. 66, pl. 23, fig. 5, 1811—Louisiana, Tennessee, and the Mississippi territory, on migration in Pennsylvania (type in Peale's Museum, doubtless lost).

*Sylvia anthoides* Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 208, 1817—new name for *Motacilla noveboracensis* Gmelin.

*Seiurus sulfurascens* d'Orbigny, in Sagra, Hist. phys., pol., etc., Cuba, Ornith., p. 57, pl. 6, 1839—Cuba (location of type not stated).

*Anthus Lherminieri* Lesson,<sup>1</sup> Rev. Zool., 2, p. 101, 1839—"Columbia?" (type in Rochefort Museum).

*Seiurus gossii* Bonaparte, Consp. Gen. Av., 1, (2), p. 306, 1850—based on *Seiurus noveboracensis* Gosse, Illust. Bds. Jamaica, pl. 28, 1849; Jamaica.

*Siurus naevius* Sharpe, Cat. Bds. Brit. Mus., 10, p. 343, 1885 (monog.).

*Siurus noveboracensis* Winge, Medd. Grønland, 21, p. 282, 1899—Nanortalik, Greenland.

*Seiurus noveboracensis* Salvin and Godman, Ibis, 1880, p. 117—Minca, Colombia; Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—La Concepción and Chirua, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda and Cienaga, Colombia; Allen, Auk, 17, p. 366, 1900—Bonda, Cienaga, and Minca, Colombia; Dalmas, Mém. Soc. Zool. France, 13, p. 136, 1900—Tobago; Berlepsch and Hartert, Nov. Zool., 9, p. 10, 1902—Orinoco River (Perico, Altagracia, Caicara, Puerto Samoro, Nericagua) and Caura Valley (La Pricion), Venezuela; Hellmayr, l.c., 13, p. 7, 1906—Caparo, Chaguaramas, and Seelet, Trinidad; Chubb, Bds. Brit. Guiana, 2, p. 407, 1921—numerous localities in British Guiana.

*Seiurus noveboracensis noveboracensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 642, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 805, 1910—Costa Rica (Bolson, Boruca, Escazú); Chapman, Bull. Amer. Mus. N. H., 36, p. 547, 1917—Chicoral and Rio Frio, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 447, 1922—Bonda, Gaira, Mamatoco, Punta Caiman, and Dibulla, Colombia; Darlington, Bull. Mus. Comp. Zool., 71, p. 411, 1931—Rio Frio, Magdalena, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 335, 1932—Guatemala (Finca Secanquim, Finca Sepacuite).

**Range.**—North America, from northern Ontario and Quebec and Newfoundland south to southern Ontario, northwestern New York, and New England, and in the mountains south to Pennsylvania and West Virginia; winters from the valley of Mexico to Colombia, Ecuador,<sup>2</sup> Venezuela, and British Guiana, and from Florida and the

<sup>1</sup> The same author, in *Echo du Monde Sav.*, 10, No. 27, p. 635, Oct. 5, 1843, mentions another species, *Seiurus guadeloupensis* Lesson, without giving any description.

<sup>2</sup> According to Chapman (Bull. Amer. Mus. N. H., 55, p. 595, 1926), both this form and *S. n. notabilis* seem to be represented among five specimens from Esmeraldas.

Bahamas throughout the West Indies to Tobago and Trinidad; in migration west to Minnesota, Iowa, and Missouri; accidental in Greenland (one record from Nanortalik).

63: Maine (Upton, 1); Connecticut (East Hartford, 14); New York (Miller Place, 9; Suffolk County, 2); West Virginia (Petroleum, 1); South Carolina (Mount Pleasant, 2); Florida (Key West, 5); West Indies (Great Bahama, 1; Berry, 1; Nassau, New Providence, 1; Cay Sal, 1; Eleuthera, 1; Inagua, 3; Grand Cayman, 1; Cayman Brac, 4; Jamaica, 1; Santo Domingo, 2; Guadeloupe, 2; Martinique, 3); Costa Rica (Las Cañas, 1); Venezuela (Los Roques Island, 1; Caracas, 3; Encontrados, Zulía, 1; Mérida, 1; Colón, Tachira, 1).

**\**Seiurus noveboracensis notabilis* Ridgway.<sup>1</sup> GRINNELL'S WATER-THRUSH.**

*Seiurus naevius notabilis* Ridgway, Proc. U. S. Nat. Mus., 3, p. 12, 1880—Black Hills [=shores of Lake Como, Carbon County], Wyoming (type in coll. of G. B. Grinnell).

*Seiurus noveboracensis notabilis* Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—Chirua, Santa Marta, Colombia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 645, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—New Providence; Carriker, Ann. Carnegie Mus., 6, p. 806, 1910—Pigres, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 36, p. 547, 1917—Colombia (Alto Bonito, La Playa, Juntas de Tamaná, San José, Caldas, Puerto Valdivia, Salento, Rio Toché, San Agustín, Chicoral, Honda, Puerto Berrio); Todd and Carriker, Ann. Carnegie Mus., 14, p. 448, 1922—La Tigra, Don Diego, and Fundación, Colombia; Grinnell, Univ. Calif. Pub. Zool., 32, p. 202, 1928—Lower California; Griscom, Bull. Amer. Mus. N. H., 64, p. 336, 1932—Guatemala (Chimoxan, Hacienda California).

**Range.**—North America, from the limit of trees in northwestern Alaska, northern Yukon, Mackenzie, and northern Manitoba south to southern British Columbia, central Montana, northwestern Nebraska, northern Minnesota, and northwestern Michigan; winters in Cuba, Haiti, Porto Rico, Martinique, and the Bahamas, and from Lower California and Mexico to Colombia and Ecuador;<sup>2</sup> accidental at East Cape, Siberia, and in California, casual in Connecticut and New Jersey.<sup>3</sup>

<sup>1</sup> An earlier name is possibly *Seiurus tenuirostris* Swainson (Phil. Mag., n.s., 1, p. 369, May, 1827), based on a specimen from the tableland (?) of Mexico. The description, "above olive brown, beneath pale yellow with triangular blackish spots; stripe above the eye pale," does not permit of definite identification, and I have not been able to ascertain if the type still exists.

<sup>2</sup> Chapman (Bull. Amer. Mus. N. H., 55, p. 595, 1926) is inclined to refer some of the specimens received from Esmeraldas to *S. n. notabilis*.

<sup>3</sup> An additional race has recently been separated as *Seiurus noveboracensis linnaeus* McCabe and Miller (Condor, 35, p. 192, 1933—type from Indianpoint

71: Illinois (Beach, Lake County, 2; Calumet, 1; Chicago, 4; Deering, 2; Fox Lake, 2; Henry, 1; Joliet, 3; Lake Forest, 8; Warsaw, 1); Wisconsin (Beaver Dam, 7; Fox Lake, 3; Lake Koshkonong, 1; Woodruff, Vilas County, 1); Iowa (Cedar Rapids, 1); Colorado (Fort Lyon, 2); North Carolina (Raleigh, 1); Florida (Nassau County, 1); West Indies (Abaco, 1; Inagua, 1; Grand Cayman, 2; Old Providence, 7; St. Andrews, 1; Mona, 1; Martinique, 1); Lower California (La Paz, 1; Todos Santos, 1); Yucatan (unspecified, 6); Guatemala (Lake Amatitlan, 1; Los Amates, Izabel, 1); Honduras (Ruatan Island, 2); Nicaragua (Gerónimo, 2); Costa Rica (Orósi, 1); Colombia (near San José de Cucuta, 1).

### Genus OPORORNIS Baird

*Oporornis* Baird, in Baird, Cassin, and Lawrence, Rep. Expl. Surv. R. R. Pac., 9, p. 246, 1858—type, by orig. desig., *Sylvia agilis* Wilson.

*Cinerosa* Maynard, Warblers New Engl., Part 5, p. 110, 1904—type, by orig. desig., *Sylvia philadelphica* Wilson.

*Frutiornis* Maynard, Directory Bds. East. N. A., Part 9, p. 251, 1907—type, by monotypy, *Sylvia formosa* Wilson.

### \**Oporornis formosus* (Wilson). KENTUCKY WARBLER.

*Sylvia formosa* Wilson, Amer. Orn., 3, p. 85, pl. 25, fig. 3, 1811—"in all the intermediate tracts between Nashville and New Orleans, and below that as far as the Balize, or mouths of the Mississippi"; Kentucky accepted as type locality (type in Peale's Museum, evidently lost).

*Oporornis formosus*(a) Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 247, 1858—eastern United States, south to Guatemala; idem, Rev. Amer. Bds., 1, p. 218, 1865—eastern United States, south to Cuba and Panama; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 148, 1881; Sharpe, Cat. Bds. Brit. Mus., 10, p. 348, 1885 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 622, 1902 (monog., full bibliog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 129, 1907—Guatemala (Los Amates, Mazatenango); Todd and Carriker, Ann. Carnegie Mus., 14, p. 450, 1922—Bonda and Don Diego, Colombia; Barbour, Mem. Nutt. Orn. Cl., 6, p. 118, 1923—Cuba (Havana and Cojimar); Naumburg, Auk, 43, p. 489, 1926—Colombia (Santa Marta, Bonda); Darlington, Bull. Mus. Comp. Zool., 71, p. 412, 1931—Rio Frio, Magdalena, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 336, 1932—Guatemala (Chimoxan, San Felipe).

Lake, Cariboo District, British Columbia, in Museum of Vertebrate Zoology, Berkeley, Calif.). It is stated to be even darker above than *S. n. notabilis*, the color of the dorsal surface being between olivaceous black and dark grayish olive, while the under parts are less yellowish than in *S. n. noveboracensis*, though more so than in *S. n. notabilis*. Its breeding range extends from central interior British Columbia to northern British Columbia. Migrants and wintering individuals have been taken in California (Santa Cruz; San Bernardino Mountains), Oregon (Beaver), Lower California (San Jorge, La Paz), and Panama (Puerto Armuelles).

*Geothlypis formosa* Bangs, Proc. Biol. Soc. Wash., 12, p. 144, 1898—Santa Marta, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda; idem, Auk, 17, p. 366, 1900—Bonda and Santa Marta.

*Sylvia aequinoctialis* (not *Motacilla aequinoctialis* Gmelin) Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 26, pl. 81, "1807"—Pennsylvania.

**Range.**—United States from southeastern Nebraska, southern Wisconsin, northern Ohio, western Pennsylvania, and the Hudson Valley south to eastern Texas, Louisiana, southern Alabama, and northern Georgia; winters in Mexico, from Tabasco, Campeche, and Chiapas south through Central America to Panama and northern Colombia (Santa Marta region); accidental in Vermont, Michigan, and Cuba.

25: Illinois (Grand Chain, 2; Henry, 1; Joliet, 1; Mound City, 3; Olive Branch, 1); Missouri (Cliff Cave, 1; Green County, 1); Kansas (Council Grove, 2); Alabama (Greensboro, 1); Mississippi (Holly Springs, 1); Texas (Corpus Christi, 2; Fort Worth, 5; Gainesville, 1; Ingram, Kerr County, 2; unspecified, 1).

**\**Oporornis agilis* (Wilson). CONNECTICUT WARBLER.**

*Sylvia agilis* Wilson, Amer. Orn., 5, p. 64, pl. 39, fig. 4, 1812—Connecticut and neighborhood of Philadelphia, Pennsylvania (location of type not stated).

*Oporornis agilis* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 246, 1858—Carlisle, Philadelphia, and southern Illinois (crit.); idem, Bds. N. Amer., pl. 79, fig. 2, 1860; idem, Rev. Amer. Bds., 1, p. 218, 1865—Pennsylvania (Philadelphia, Carlisle), Virginia (London County), Washington, Wisconsin (Racine), and Illinois (Cook County); Sharpe, Cat. Bds. Brit. Mus., 10, pp. 347, 653, 1885 (monog.); Berlepsch, Journ. Orn., 37, p. 98, 1889—Tonantins, Rio Solimões, Brazil (Apr. 9, 1884; spec. examined); Bonhote, Ibis, 1899, p. 510—Nassau, New Providence (Oct. 14); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 625, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—New Providence, Cay Sal, and Cay Lobos, Bahamas; Hellmayr, Nov. Zool., 17, p. 264, 1910—Allianca, Rio Madeira (Nov. 16, 1907); Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 46, 1912—[Cumbre de Valencia], Venezuela (Oct. 10, 1910); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 153, 1916—Maipures, Rio Orinoco, Venezuela; Todd and Carriker, Ann. Carnegie Mus., 14, p. 450, 1922—Bonda, Colombia; Naumburg, Auk, 43, p. 489, 1926—Colombia (Bonda; Oct. 22), Venezuela (Maipures; Apr. 28), and Brazil (São Lourenço River; Dec. 26, Jan. 2); idem, Bull. Amer. Mus. N. H., 60, p. 338, 1930—São Lourenço River, Matto Grosso; Darlington, Bull. Mus. Comp. Zool., 71, p. 411, 1931—Rio Frio, Magdalena, Colombia (October).

*Geothlypis agilis* Allen, Bull. Amer. Mus. N. H., 13, p. 177, 1900—Bonda, Colombia (Oct. 22); idem, Auk, 17, p. 366, 1900—same locality.

(?) *Trichas lephrocotis* Nuttall, Man. Orn. U. S. and Canada, 2nd ed., Land Birds, p. 462, 1840—New Garden, Chester County, Pennsylvania (type lost, formerly in the Academy of Natural Sciences, Philadelphia).

*Range*.—Canadian zone of North America from Alberta and Manitoba to central Minnesota and northern Michigan; migrating through South Carolina, Florida, the Bahamas, Colombia (Bonda and Rio Frio), and Venezuela (Cumbre de Valencia, Carabobo; Maipures, Rio Orinoco), and wintering in Brazil (Tonantins, Rio Solimões, Apr. 9; Allianca, Rio Madeira, Nov. 16; Rio São Lourenço, Matto Grosso, Dec. 26, Jan. 2); casual northeast of Massachusetts and in Ontario; accidental in Colorado.

37: Canada (Hamilton, Ontario, 2); Wisconsin (Beaver Dam, 9; Portage County, 1); Illinois (Beach, Lake County, 2; Chicago, 1; Deerfield, 2; Henry, 1; Joliet, 1; Lake Forest, 1); Massachusetts (Brookline, 1; Cambridge, 4; Concord, 1; Needham, 1; Reading, 1); Connecticut (East Hartford, 3); New Jersey (Englewood, 4); Bahama Islands (Cay Sal, 2).

**\**Oporornis philadelphia* (Wilson). MOURNING WARBLER.**

*Sylvia philadelphia* Wilson, Amer. Orn., 2, p. 101, pl. 14, fig. 6, 1810—within a few miles of Philadelphia, Pennsylvania (location of type not stated, doubtless lost).

*Geothlypis philadelphia* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 243, 1858—Pennsylvania (Carlisle), Illinois, and Missouri (crit.); idem, Bds. N. Amer., pl. 79, fig. 3, 1860; idem, Rev. Amer. Bds., 1, p. 226, 1865—eastern United States to Panama; Wyatt, Ibis, 1871, p. 322—Ocaña, Colombia; Selater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 494—Santa Elena and Medellín, Colombia; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 154, 1881—North and Central America to Colombia; Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 74—Mapoto, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 366, 1885 (monog.); Winge, Medd. Grønland, 21, p. 282, 1899—Greenland (Fiskenaes and Julianehaab); Bangs, Proc. Biol. Soc. Wash., 13, p. 105, 1899—Chirua and La Concepción, Colombia; Allen, Auk, 17, p. 366, 1900—same localities; Goodfellow, Ibis, 1901, p. 314—Papallacta, Ecuador.

*Oporornis philadelphia* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 628, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 808, 1910—Costa Rica; Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 276, 1910—Guayábo, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 36, p. 546, 1917—Dabeiba, Salencio, Puerto Berrio, Honda, Chipaque, Buena Vista, and Villavicencio, Colombia; Todd and Carriker, Ann. Carnegie Mus., 14, p. 449, 1922—Cincinnati and Dibulla, Santa Marta, Colombia; Todd, Auk, 42, p. 282, 1925—Santa Isabel, Porto Rico (Mar. 21, 1912); Naumburg, l.c., 43, p. 489, 1926—Colombia (Rio Frio, Villavicencio, Santa Marta region), Venezuela (Escorial), and Ecuador (below Chaco, Oyacachi); Chapman, Bull. Amer. Mus. N. H., 55, p. 595, 1926—below

Oyacachi, Ecuador; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 525, 1927—Santa Isabel, Porto Rico; Darlington, Bull. Mus. Comp. Zool., 71, p. 411, 1931—Rio Frio, Magdalena, Colombia; Griscom, Bull. Amer. Mus. N. H., 64, p. 336, 1932—Guatemala (Panajachel, La Carolina).

*Range*.—Lower Canadian zone of North America from Alberta, Saskatchewan, Manitoba, Nova Scotia, Newfoundland, and the Magdalen Islands south to Minnesota, Michigan, central Ontario, and the mountains of New York, Pennsylvania, Massachusetts, and West Virginia; winters from Nicaragua and Costa Rica to western Venezuela (Mérida region), Colombia, and eastern Ecuador (Mapoto and below Oyacachi); accidental in Porto Rico (one record from Santa Isabel) and Greenland (two records).

31: Canada (Hamilton, Ontario, 2); Maine (Lincoln, 1; Upton, 1); Massachusetts (Brookline, 1); New York (Albany, 1; Conquest, 1; Sennett, 1); Wisconsin (Beaver Dam, 3; Woodruff, Vilas County, 4); Illinois (Beach, Lake County, 2; Chicago, 2; Deerfield, 1; Joliet, 1; Libertyville, 1); Texas (Refugio County, 2); Costa Rica (El Pózo, Rio Terraba, 1; Guayábo, 1; Volcan de Oso, 1); Colombia ("Bogotá," 1); Venezuela (Colón, Tachira, 2; Encontrados, Zulia, 1).

**\**Oporornis tolmiei* (Townsend). MACGILLIVRAY'S WARBLER.**

*Sylvia tolmiei* Townsend, Narr. Journ. Rocky Mts., p. 343, April, 1839—Columbia River=Fort Vancouver, Washington.<sup>1</sup>

*Sylvia macgillivrayi* Audubon, Orn. Biog., 5, p. 75 (after May 1), 1839—Columbia River.<sup>2</sup>

*Geothlypis macgillivrayi* Baird, Rep. Expl. Surv. R. R. Pac., 9, p. 244, 1858—Pacific United States (crit.); idem, Bds. N. Amer., pl. 99, fig. 4, 1860; idem, Rev. Amer. Bds., 1, p. 227, 1865—western North America to Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 155, 1881—western North America to Panama (Chiriquí); Sharpe, Cat. Bds. Brit. Mus., 10, p. 364, 1885—North and Central America and Colombia (Santa Elena, Bogotá).

*Oporornis tolmiei* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 631, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 807, 1910—San José, Costa Rica; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 129, 1907—Guatemala (Lake Amatitlan, Patulul, Lake Atitlan); Naumburg, Auk, 43, p. 489, 1926—Lower California to Colombia; Grinnell, Univ. Calif. Pub. Zool., 32, p. 203, 1928—Cape district of Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 284, 1931—Sonora (San

<sup>1</sup> Cotypes of Townsend are in the United States National Museum, the Academy of Natural Sciences, Philadelphia, and the Museum of Comparative Zoology, Cambridge, Mass. Cf. Stone, Proc. Acad. Nat. Sci. Phila., 51, p. 15, 1899, and Bangs, Bull. Mus. Comp. Zool., 70, p. 359, 1930.

<sup>2</sup> Based on the same specimens that served as types for *S. tolmiei* Townsend.

Javier, Saric, Chinobampo, Guirocoba); Griscom, Bull. Amer. Mus. N. H., 64, p. 386, 1932—Guatemala.

*Trichas vegela* (ex Lichtenstein MS.) Bonaparte, Consp. Gen. Av., 1, (2), p. 310, end of 1850—Mexico (type in the Berlin Museum).

**Range.**—Lower Canadian and Transition zones from southeastern Alaska, central British Columbia and Alberta, and southern Saskatchewan south to central California, northern Arizona, and northern New Mexico, and from the Pacific coast to the eastern foothills of the Rocky Mountains and the Black Hills of South Dakota; wintering from Lower California to Panama and (according to Sharpe) to Colombia; casual in migration to North Dakota, Nebraska, Illinois, Indiana, and Texas.

24: Colorado (Fort Lyon, 4; Hot Sulphur Springs, 3); California (Nicasio, 4; Piute Mountains, Kern County, 1; Sierra City, 1); Arizona (Tucson, 1); Mexico (Iguala, Guerrero, 1; Jalisco, 1); Guatemala (Lake Amatitlan, 1; Lake Atitlan, 2; Patulul, 2); Panama (Colón, 2); unspecified, 1.

### Genus TERETISTRIS Cabanis

*Teretistris* Cabanis, Journ. Orn., 3, p. 476 (in text), 1855—type, by orig. desig., *Anabates fernandinae* Lembeye.

*Teretristis* Baird, Rev. Amer. Bds., 1, p. 233, 1865—emendation.

#### \**Teretistris fernandinae* (Lembeye). FERNANDINA'S WARBLER.

*Anabates fernandinae* Lembeye, Aves Isla de Cuba, p. 66, pl. 5, fig. 2, 1850—western Cuba (type probably in the Havana Museum); Gundlach, Journ. Bost. Soc. N. H., 6, p. 317, 1853—Cuba (nest and eggs descr.).

*Teretistris fernandinae* Gundlach, Journ. Orn., 3, p. 475, 1855—Cuba (habits, nest); idem, l.c., 20, p. 418, 1872—Cuba (habits); Sharpe, Cat. Bds. Brit. Mus., 10, p. 368, pl. 12, fig. 1, 1885—western Cuba (San Cristóbal); Cory, Auk, 3, p. 45, 1886—western Cuba (descr.); idem, Bds. W. Ind., p. 59, 1889—western Cuba; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 649, 1902—western Cuba and Isle of Pines (monog.); Bangs and Zappey, Amer. Nat., 39, p. 210, 1905—Isle of Pines (Pasadita and Callebonita); Todd, Ann. Carnegie Mus., 10, p. 262, 1916—Isle of Pines (Siguanea and Los Indios); Barbour, Mem. Nutt. Orn. Cl., 6, p. 119, 1923—western Cuba.

*Teretristis fernandinae* Baird, Rev. Amer. Bds., 1, p. 234, 1865—Fermina, Cuba (crit.).

*Helmitheros blanda* Bonaparte, Consp. Gen. Av., 1, (2), p. 314, end of 1850—Cuba (type in Berlin Museum).

**Range.**—Western part of Cuba, including the Isle of Pines, Greater Antilles.

9: Cuba (western Cuba, 8); Isle of Pines, 1.



**\**Teretistris fornsi* Gundlach.<sup>1</sup> FORNS'S WARBLER.**

*Teretistris fornsi* Gundlach, Ann. Lyc. Nat. Hist. N. Y., 6, p. 274, 1858—eastern part of Cuba (type in coll. of J. Gundlach, probably in the Havana Museum); idem, Journ. Orn., 20, p. 418, 1872—Cuba (habits); Sharpe, Cat. Bds. Brit. Mus., 10, p. 368, pl. 12, fig. 2, 1885—eastern Cuba (Monte Verde); Cory, Auk, 3, p. 45, 1886—eastern Cuba (descr.); idem, Bds. W. Ind., p. 59, 1889—eastern Cuba; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 649, 1902—eastern Cuba (monog.); Barbour, Mem. Nutt. Orn. Cl., 6, p. 120, 1923—eastern Cuba; Wetmore, Proc. U. S. Nat. Mus., 81, art. 2, p. 37, 1932—Rio Gibara, Cuba.

*Teretistris fornsi* Baird, Rev. Amer. Bds., 1, p. 235, 1865—Monte Verde, Cuba (crit.).

*Range*.—Eastern part of the island of Cuba, Greater Antilles.  
5: eastern Cuba.

**Genus LEUCOPEZA Sclater**

*Leucopeza* Sclater, Proc. Zool. Soc. Lond., 1876, p. 14—type, by monotypy,  
*Leucopeza semperi* Sclater.

**\**Leucopeza semperi* Sclater. SEMPER'S WARBLER.**

*Leucopeza semperi* Sclater, Proc. Zool. Soc. Lond., 1876, p. 14, pl. 2—Santa Lucia (type in coll. of P. L. Sclater, now in British Museum); Allen, Bull. Nutt. Orn. Cl., 5, p. 166, 1880—Santa Lucia; Sharpe, Cat. Bds. Brit. Mus., 10, pp. 228, 638, 1885—Santa Lucia (monog.); Cory, Ibis, 1886, p. 475—Santa Lucia; idem, Auk, 3, p. 40, 1886—Santa Lucia (descr.); idem, Bds. W. Ind., p. 54, 1889—Santa Lucia; Sclater, Proc. Zool. Soc. Lond., 1889, p. 395—Santa Lucia; Ridgway, Proc. U. S. Nat. Mus., 12, p. 129, 1889—Port Castries, Santa Lucia; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 651, 1902—Santa Lucia (monog., full bibliog.).

*Range*.—Island of Santa Lucia, Lesser Antilles.

6: Santa Lucia.

**Genus MICROLIGEA Cory**

*Ligea* (not of Dybowski, 1876) Cory, Auk, 1, p. 1, 1884—type, by orig. desig.,  
*Ligea palustris* Cory.

*Ligia* (not of Fabricius, 1798, nor Dupré, 1829) Cory, Bds. Haiti and San Dom., p. 38, March, 1884—emendation of *Ligea* Cory.

*Microligea* Cory, Auk, 1, p. 290, 1884—new name for *Ligea* Cory, preoccupied.

**\**Microligea palustris palustris* (Cory). HISPANIOLAN GROUND WARBLER.**

*Ligea palustris* Cory, Auk, 1, p. 1, pl. 1, 1884—Santo Domingo (type in coll. of C. B. Cory, now in Field Museum); idem, Bds. Haiti and San Dom., p. 38, March, 1884—Almercen, Santo Domingo.

<sup>1</sup> Although in habits and actions it is stated to resemble its western ally, this bird seems too different to be regarded as conspecific with *T. fernandinae*. Moreover, the exact limits of its range have yet to be determined.

*Microligea palustris* Cory, Auk, 1, p. 290, 1884; idem, Auk, 3, p. 44, 1886—Santo Domingo (descr.); idem, Bds. W. Ind., p. 58, 1889—Santo Domingo; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 652, 1902—Haiti (monog.); Verrill, Proc. Acad. Nat. Sci. Phila., 61, p. 365, 1909—El Valle; Chapman, Bull. Amer. Mus. N. H., 37, p. 331, 1917—Loma Tina and Loma Rucilla; Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 513, 1928—Morne La Selle, Crête à Piquant, Morne Tranchant, and Morne Brouet, Haiti (habits); Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 324, 1929—Sitio la Maguana; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 394, 1931—Hispaniola (monog.).

*Ligia palustris* Sharpe, Cat. Bds. Brit. Mus., 10, p. 349, 1885—Santo Domingo.

*Microligia palustris* Cherrie, Field Columb. Mus., Orn. Ser., 1, p. 12, 1896—Santo Domingo City and Honduras, Santo Domingo (habits).

**Range.**—Island of Haiti, Greater Antilles.

12: Dominican Republic (Almercen, 6; Santo Domingo City, 4; Honduras, 2).

***Microligea palustris vasta* Wetmore and Lincoln.<sup>1</sup> BEATA ISLAND GROUND WARBLER.**

*Microligea palustris vasta* Wetmore and Lincoln, Proc. Biol. Soc. Wash., 44, p. 121, 1931—Beata Island, Dominican Republic (type in U. S. National Museum).

*Microligea palustris* (not of Cory) Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 394, 1931—part, spec. from Trujín.

**Range.**—Beata Island, and parts of the Barahona Peninsula, Dominican Republic, island of Haiti, Greater Antilles.

**\**Microligea montana* Chapman.<sup>2</sup> CHAPMAN'S GROUND WARBLER.**

*Microligea montana* Chapman, Bull. Amer. Mus. N. H., 37, p. 330, 1917—Mount Tina, Prov. de Azua, Dominican Republic (type in Brewster-Sanford Collection, in the American Museum of Natural History, New York); Bond, Proc. Acad. Nat. Sci. Phila., 80, p. 513, 1928—Morne Malanga, Morne Tranchant, and Massif de la Selle (habits, nest and eggs descr.); Moltoni, Atti Soc. Ital. Sci. Nat., 68, p. 324, 1929—Monte

<sup>1</sup> *Microligea palustris vasta* Wetmore and Lincoln: "Similar to *M. p. palustris*, but decidedly paler both above and below; under surface with white of breast and abdomen more extensive; sides and flanks distinctly lighter; gray of crown and hind neck paler; green of back, rump, and wing lighter; slightly smaller. Wing, 60.3–66.4; tail, 51.5–65; culmen (from base), 13.9–15.3; females, wing, 56.1–67.8; tail, 58–64.5; culmen, 14–15.4." (Wetmore and Lincoln, l.c.).

<sup>2</sup> *Microligea montana* Chapman: Similar to *M. p. palustris*, but with heavier, stouter bill; plumage of a firmer, less fluffy texture; distinct supraloral streak white; outer webs of second to fifth primaries white, forming a conspicuous longitudinal stripe on the wing; upper tail coverts slate gray; rectrices dusky edged with slate gray, the lateral ones with a white apical spot; under parts nearly pure white. Wing, 67–69; tail, 66–70; bill, 13½–15.

This bird is evidently quite distinct specifically, being found side by side with *M. p. palustris* where the latter penetrates the highlands.

Viejo; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 396, pl. 25, 1931—highlands of Hispaniola.

*Range*.—Highlands of Haiti, Greater Antilles.

2: Santo Domingo (Mount Tina, 2).

### Genus GEOTHYLPIS Cabanis

*Trichas* (not of Gloger, March, 1827) Swainson, Phil. Mag., (n.s.), 1, No. 6, p. 433, June, 1827—type, by monotypy, *Trichas personatus* Swainson = *Turdus trichas* Linnaeus.

*Geothlypis* Cabanis, Arch. Naturg., 13, (1), p. 316, 1847—new name for *Trichas* Swainson, preoccupied.

### \**Geothlypis trichas brachidactyla* (Swainson). NORTHERN YELLOW-THROAT.

*Trichas brachidactylus* Swainson, Anim. Menag., p. 295, Dec. 31, 1837—"the northern provinces of the United States" (location of type not stated).

*Geothlypis restricta* Maynard, Amer. Exchange and Mart, Jan. 15, p. 33, 1887—"Bahamas" (type from Nassau, New Providence, in coll. of C. J. Maynard, later in coll. of G. S. Miller,<sup>1</sup> now in the British Museum); Bangs, Auk, 17, p. 289, 1900—Nassau, Hog Island, and Salt Key (crit.).

*Geothlypis trichas brachidactyla* Palmer, Auk, 17, pp. 221, 222, 1900 (crit., range); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 664, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—Bahamas; Oberholser, Auk, 34, p. 324, 1917 (crit., range); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 129, 1907—Guatemala (winter); Phillips, Auk, 28, p. 86, 1911—Tamaulipas (Matamoros, San Fernando, Altamira, Rio Cruz); Peters, Auk, 30, p. 378, 1913—Camp Mengel and Xcopen, Quintana Roo; Barbour, Mem. Nutt. Orn. Cl., 6, p. 120, 1923—Cuba; Wetmore, Sci. Surv. Porto Rico and Virgin Is., 9, p. 525, 1927—Porto Rico; Peters, Bull. Mus. Comp. Zool., 69, p. 464, 1929—eastern Honduras; Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 398, 1931—Hispaniola; Griscom, Bull. Amer. Mus. N. H., 64, p. 337, 1932—Guatemala.

*Range*.—Eastern North America from Newfoundland, southern Labrador, Quebec, Nova Scotia, New Brunswick, and Maine south to northern Pennsylvania, southern New York, and northern New Jersey, and west to Ontario and North Dakota; winters in the Bahamas, Greater Antilles, and through eastern Mexico to Guatemala, Honduras, and (rarely) Costa Rica; accidental in Tobago (one record).

167: Maine (Brewer, 3; Upton, 1); Massachusetts (Dedham, 1); Connecticut (East Hartford, 25); New York (Auburn, 1; Shelter Island, 1); Indiana (Bluffton, 1; unspecified, 1); Illinois (Chicago, 7; Deering, 3; Grand Chain, 12; Henry, 6; Joliet, 2; Lake Forest, 5;

<sup>1</sup> Cf. Palmer, Auk, 17, p. 224, 1900.

Libertyville, 1; Mound City, 3; Olive Branch, 6); Wisconsin (Beaver Dam, 20); Florida (Gainesville, 1; Key West, 3; New River, 1; West Jupiter, 3); West Indies (Great Bahama, 4; Abaco, 4; Bimini, 2; Berry, 1; Nassau, New Providence, 1; Eleuthera, 7; Inagua, 1; Cayman Brac, 3; Jamaica, 8; Haiti, 1; Anguilla, 2); Mexico (Tampico, 2; Teapa, Tabasco, 2; Yucatan, Mugeris Island, 1; Holbox Island, 1; unspecified, 6); Guatemala (Lake Amatitlan, 2; Lake Atitlan, 1; Los Amates, Izabel, 5; Mazatenango, 2; San José, Escuintla, 1); Nicaragua (San Gerónimo, 2); Costa Rica (Guayábo, 1).

**\**Geothlypis trichas trichas* (Linnaeus). MARYLAND YELLOW-THROAT.**

*Turdus trichas* Linnaeus, Syst. Nat., 12th ed., 1, p. 293, 1766—based mainly on "The Maryland Yellow-throat" Edwards, Glean. Nat. Hist., 1, p. 56, pl. 237, lower fig.; Carolina.

*Sylvia marilandica* Wilson, Amer. Orn., 1, p. 88, pl. 6, fig. 1 (=male), 1808; idem, l.c., 2, p. 163, pl. 18, fig. 4 (=female), 1809—United States from Maine to Florida and Louisiana (no type extant).<sup>1</sup>

*Regulus* (?) *mystaceus* Stephens, in Shaw, Gen. Zool., 13, (2), p. 232, 1825—new name for *Sylvia trichas* Stephens (in Shaw, Gen. Zool., 10, [2], p. 682, 1817)=*Turdus trichas* Linnaeus.

*Trichas personatus* Swainson, Phil. Mag., (n.s.), 1, No. 6, p. 433, June, 1827—new name for *Sylvia marilandica* Wilson, Amer. Orn., 1, pl. 6, fig. 1.

*Geothlypis trichas* Sharpe, Cat. Bds. Brit. Mus., 10, p. 351, 1885 (monog., in part); Riley, in Shattuck, The Bahama Islands, p. 366, 1905—Bahamas.

*Geothlypis trichas trichas* Palmer, Auk, 17, p. 220, 1900 (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 661, 1902 (monog., full bibliog.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 447, 1922—Páramo de Chiruqua, Colombia (Apr. 21); Wetmore and Swales, Bull. U. S. Nat. Mus., 155, p. 397, 1931—Hispaniola (winter visitant).

**Range.**—Southern United States from southern Pennsylvania south to northwestern Georgia, western Alabama and eastern Texas; winters from North Carolina and Louisiana to Florida, the Bahamas, and Haiti, casually in Pennsylvania and New Jersey; accidental in Colombia (Páramo de Chiruqua).

128: New Jersey (Englewood, 1); Ohio (Columbus, 3); Tennessee (Waverly, 1); Mississippi (Holly Springs, 9; Vicksburg, 9); Louisiana (Chef Menteur, 3; Knoxville, 1; New Orleans, 9); Texas (Corpus Christi, 3; Fort Worth, 1); Florida (Enterprise, 1; Gainesville, 2;

<sup>1</sup> *Sylvia pumilia* Vieillot (Hist. Nat. Ois. Amér. Sept., 2, p. 39, pl. 100, "1807" [?1808]), from "Jamaïque, Saint-Domingue, Caienne, ainsi qu'à la Caroline où elle niche et passe l'été," may be a female of some *Geothlypis*, but unless the type can be found in the Paris Museum, this bird will always remain in doubt, as the author evidently comprised several species under that heading. Description and plate afford no clew as to its identification.

Georgiana, 1; Key West, 3; Miakka, Manatee County, 1; Palm Beach, 3; West Jupiter, 5); West Indies (Great Bahama, 7; Abaco, 8; Bimini, 3; Berry, 6; Nassau, New Providence, 4; Andros, 2; Eleuthera, 7; Inagua, 1; Grand Cayman, 1; Santo Domingo, 33).

**\**Geothlypis trichas typhicola* Burleigh.<sup>1</sup> ATHENS YELLOW-THROAT.**

*Geothlypis trichas typhicola* Burleigh, Proc. Biol. Soc. Wash., 47, p. 21, 1934—Athens, Georgia (type in U. S. National Museum).

**Range.**—Central and southeastern Alabama, Georgia (excepting the extreme northwestern corner), South Carolina, North Carolina, and southeastern Virginia (Dismal Swamp).

4: South Carolina (Mount Pleasant, 2); Georgia (Montezuma, 2).

**\**Geothlypis trichas ignota* Chapman. FLORIDA YELLOW-THROAT.**

*Geothlypis trichas ignota* Chapman, Auk, 7, p. 11, 1890—Tarpon Springs, Florida (cotypes in coll. of W. E. D. Scott, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 360, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 667, 1902 (monog., full bibliog.).

*Sylvia trichas roscoe* (not *Sylvia roscoe* Audubon?<sup>2</sup>) Palmer, Auk, 17, pp. 221, 222, 1900 (crit., range).

**Range.**—Florida and the Gulf coast of Louisiana.

32: Florida (Gainesville, 1; Key West, 2; Mary Esther, 3; Nassau County, 7; New Berlin, 1; Palm Beach, 5; Puntarasa, 2; Santa Rosa Island, 1; West Jupiter, 5; Wilson, 5).

**\**Geothlypis trichas occidentalis* Brewster. WESTERN YELLOW-THROAT.**

*Geothlypis trichas occidentalis* Brewster, Bull. Nutt. Orn. Cl., 8, p. 169, July, 1883—Truckee River, Nevada (type in coll. of W. Brewster, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus.

<sup>1</sup>*Geothlypis trichas typhicola* Burleigh: Nearest to *G. t. trichas*, but with longer wing and tail, more brownish upper parts, darker flanks, and more extensively yellowish under parts. Wing, 55, (female) 50; tail, 56, (female) 50; bill, 10–10½.

From *G. t. ignota* it is distinguishable by its distinctly smaller bill and less brownish upper parts, and from *G. t. brachidactyla* by its more brownish upper surface, duller gray crown patch, smaller bill, and longer tail. On the coast of North Carolina it intergrades with *G. t. trichas*, while specimens from extreme southern Georgia and southeastern Alabama approach *G. t. ignota* in the larger size of the bill (Burleigh, l.c.).

<sup>2</sup>*Sylvia roscoe* Audubon (Orn. Biog., 1, p. 124, 1831—"not far from the River Mississippi, Mississippi") based on an immature male shot in September, 1821, seems to be unidentifiable. The type, if there ever was one, has disappeared, and from Chapman's investigations it results that the Mississippi Valley bird is not properly separable from *G. t. trichas*.

Comp. Zool., 70, p. 360, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 668, 1902—part, excl. southern California, Lower California (breeding records), and Chihuahua (full bibliog.); Swarth, Univ. Calif. Pub. Zool., 10, pp. 71, 72, 1912—Vancouver Island (crit., range); Grinnell, Univ. Calif. Pub. Zool., 32, p. 203, 1928—Lower California (winter visitant); van Rossem, Trans. San Diego Soc. N. H., 6, p. 285, 1931—Tecoripa, Tésia, and Guirocoba, Sonora (spring migrant); Griscom, Bull. Amer. Mus. N. H., 64, p. 337, 1932—Guatemala (Ojos and Panajachel).

*Geothlypis trichas arizela* Oberholser, Auk, 16, p. 257, 1899—Fort Steilacoom, Washington (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 670, 1902—part, excl. southern California.

**Range.**—Western North America from extreme southeastern Alaska, central British Columbia, and Vancouver Island, central Alberta, and the western portion of the Great Plains (South Dakota and Texas) south to south-central California and southern Nevada; winters through Lower California, in western Mexico to Nayarit, and even in western Guatemala (Ojos and Panajachel).<sup>1</sup>

25: British Columbia (Okanagan, 2); Washington (Prescott, 1); North Dakota (Carrington, 1); Nevada (Truckee River, 1); Colorado (Colorado Springs, 1; Fort Lyon, 4); Arizona (Calabasas, 4; Fairbanks, 3; Tucson, 1); New Mexico (Mimbres, 3); Texas (Cameron County, 1; Harlingen, 1); Lower California (unspecified, 2).

**\**Geothlypis trichas sinuosa* Grinnell.<sup>2</sup> SALT MARSH YELLOW-THROAT.**

*Geothlypis trichas sinuosa* Grinnell, Condor, 3, p. 65, 1901—Palo Alto, California (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 300, 1932); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 672, 1902—salt marshes about San Francisco Bay, California.

**Range.**—Coast belt of California from San Francisco Bay south to San Luis Obispo County; casual in winter south to Orange County.

1: California (Elmhurst, 1).

**\**Geothlypis trichas scirpicola* Grinnell.<sup>3</sup> TULE YELLOW-THROAT.**

<sup>1</sup> According to the researches of Swarth (Univ. Calif. Pub. Zool., 10, pp. 71-73, 1912) and Grinnell (l.c., 12, p. 202, 1914), the alleged Pacific coast race (*G. t. arizela*) cannot be maintained.

<sup>2</sup> *Geothlypis trichas sinuosa* Grinnell: Similar to *G. t. occidentalis*, but considerably smaller, and coloration both above and below somewhat darker; in coloration much like *G. t. modesta*, but slightly more olive with decidedly smaller bill. Wing (adult male), 50-54; tail, 45-50; bill, 10-11.

<sup>3</sup> *Geothlypis trichas scirpicola* Grinnell: Similar to *G. t. occidentalis*, but distinguished by larger bill and brighter coloration; yellow of throat and breast brighter, extending over the entire abdomen and sometimes tinging the flanks; whitish posterior margin to black facial mask not sharply defined, but frequently carried backward over the whole crown and to the nape (Swarth, l.c.).

*Geothlypis trichas scirpicola* Grinnell, Condor, 3, p. 65, 1901—El Monte, Los Angeles County, California (type in coll. of J. Grinnell, now in Museum of Vertebrate Zoology, Berkeley; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 300, 1932); Swarth, Univ. Calif. Pub. Zool., 10, p. 72, 1912—part, southern California (crit.); Grinnell, l.c., 12, p. 202, 1914—lower Colorado Valley, California (crit.); idem, l.c., 32, p. 203, 1928—northern Lower California; van Rossem, Condor, 32, p. 297 (in text), 1930 (range).

*Geothlypis trichas occidentalis* (not of Brewster) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 668, 1902—part, southern California and northern Lower California.

*Geothlypis trichas arizela* (not of Oberholser) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 670, 1902—part, Los Angeles County, California.

*Range*.—Fresh-water marshes of southern California (Los Angeles, Orange, and San Diego counties north to Santa Barbara and the South Fork River) and in the Colorado River drainage east to Washington County, Utah, and up the Gila and Santa Cruz rivers at least to Tucson, Arizona, also on the western side of Lower California to latitude 30° (apparently resident).

10: California (Alameda, 1; Cienega, Los Angeles County, 1; Colton, San Bernardino County, 1; Corona, 2; Marysville, 2; Playa del Rey, Los Angeles County, 1; San José, 2).

***Geothlypis trichas insperata* van Tyne.<sup>1</sup> BROWNSVILLE YELLOW-THROAT.**

*Geothlypis trichas insperata* van Tyne, Occas. Pap. Mus. Zool. Univ. Mich., 255, p. 3, Feb., 1933—Rio Grande Delta below Brownsville, Texas (type in University of Michigan Museum of Zoology).

*Range*.—Rio Grande Delta below Brownsville, Texas.

***Geothlypis trichas chryseola* van Rossem.<sup>2</sup> SONORAN YELLOW-THROAT.**

<sup>1</sup>*Geothlypis trichas insperata* van Tyne: Similar to *G. t. trichas*, but bill larger; forehead more whitish and general coloration paler. Compared with *G. t. occidentalis*, it is smaller (wing of male 53–56 instead of 55–60), but has a larger bill, more whitish belly and flanks, and less extensively white forehead. From *G. t. brachidactyla* it may be separated by paler coloration and shorter wings, and its bill is larger even than in that race. The ninth primary, in *G. t. insperata*, is shorter than the fourth instead of being longer as in *G. t. brachidactyla*. In proportion of the ninth primary it resembles *G. t. ignota*, but is much paler and has a much larger bill, the last-named character being sufficient to distinguish *G. t. insperata* from the Pacific coast forms. From *G. t. melanops* the new form differs by being much smaller and more whitish on the belly. Male: wing, 53–56; tail, 48–53 (van Tyne, l.c.).

<sup>2</sup>*Geothlypis trichas chryseola* van Rossem: Nearest to *G. t. melanops*, but smaller and coloration lighter as well as brighter; yellow of under parts more intense, and green of upper surface more yellowish, less olive; similar also to *G. t. scirpicola*, but more brightly colored, the lower parts particularly so with less grayish suffusion on the flanks, and the post-frontal white band in the males wider and noticeably

*Geothlypis trichas chryseola* van Rossem, Condor, 32, p. 298, 1930—Sarıc, Sonora (type in coll. of Donald R. Dickey, Pasadena); idem, Trans. San Diego Soc. N. H., 6, p. 285, 1931—Sarıc and Tecoripa, Sonora.

*Geothlypis trichas occidentalis* (not of Brewster) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 668, 1902—part, San Diego, Chihuahua.

*Geothlypis trichas scirpicola* (not of Grinnell) Swarth, Univ. Calif. Pub. Zool., 10, p. 72, 1912—part, San Pedro River, Cochise County, Arizona (crit.); idem, Proc. Calif. Acad. Sci., (4), 18, p. 339, 1929—San Pedro River.

**Range.**—Northwestern Mexico, in north-central Sonora and northern Chihuahua (San Diego), north to the San Pedro River in Cochise County, Arizona.

***Geothlypis trichas modesta* Nelson.<sup>1</sup> SAN BLAS YELLOW-THROAT.**

*Geothlypis trichas modestus* Nelson, Auk, 17, p. 269, 1900—San Blas, Tepic [=Nayarit], Mexico (type in U. S. National Museum).

*Geothlypis trichas modesta* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 672, 1902 (monog., bibliog.); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 43, 1927—San Blas, Nayarit; van Rossem, Condor, 32, p. 298, 1930—southern Sonora and Lower California (Magdalena Bay and San José Island); idem, Trans. San Diego Soc. N. H., 6, p. 285, 1931—Sonora (Guásimas Lagoon, Empalme, Tóbari Bay, Tésia, Obregón, Agiabampo).

**Range.**—Western Mexico, from southern Sonora (vicinity of Guaymas) south through Sinaloa, Nayarit, and Jalisco, to Colima;<sup>2</sup> accidental in southern Lower California (Magdalena Bay and San José Island; March).

**\**Geothlypis trichas melanops* Baird. JALAPA YELLOW-THROAT.**

*Geothlypis melanops* Baird, Rev. Amer. Bds., 1, p. 222, Apr., 1865—Mexico, probably Jalapa, Vera Cruz (type in U. S. National Museum); Salvin, Ibis, 1872, p. 149 (footnote)—Mexico (descr. of female); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 151, 1881—Mexico; Sharpe, Cat. Bds. Brit. Mus., 10, p. 355, pl. 9, fig. 2, 1885—near Mexico City and Jalapa.

*Geothlypis trichas melanops* Palmer, Auk, 17, p. 222, 1900—eastern Mexico (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 673, 1902—eastern Mexico (monog., bibliog.).

tinged with yellow. Wing (average of adult male), 55½; tail, 53½; bill, 11–12 (van Rossem, l.c.).

Birds from the San Pedro River, Arizona, while intermediate to *scirpicola*, are regarded by van Rossem as more properly referable to his new Sonoran race.

<sup>1</sup> *Geothlypis trichas modesta* Nelson: Very much like *G. t. sinuosa*, but slightly grayer (less olive), tail longer, and bill decidedly larger (van Rossem, l.c.).

Birds from southern Sonora are stated by van Rossem to be intermediate to *G. t. chryseola*, though nearer to *G. t. modesta*.

<sup>2</sup> In the absence of satisfactory material it must remain an open question whether the yellow-throat breeding in Guanajuato, Tlaxcala, and Puebla belongs with *G. t. modesta* or *G. t. melanops*.



*Range*.—Eastern Mexico, in states of Vera Cruz (Jalapa), Oaxaca, and Mexico (valley of Mexico).<sup>1</sup>

1: Mexico (unspecified, 1).

***Geothlypis beldingi goldmani* Oberholser.<sup>2</sup> GOLDMAN'S YELLOW-THROAT.**

*Geothlypis beldingi goldmani* Oberholser, Condor, 19, No. 6, p. 183, Dec., 1917—San Ignacio, Lower California (type in U. S. National Museum); Grinnell, Univ. Calif. Pub. Zool., 32, p. 204, 1928—Lower California (from Comondú to San Ignacio).

*Geothlypis beldingi* (not of Ridgway) Bryant, Proc. Calif. Acad. Sci., (2), 2, p. 20, 1889—Comondú (breeding; nest, eggs, and young descr.); idem, l.c., p. 310, 1889—Comondú, lower Purísima Cañon, and San Ignacio; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 679, 1902—part, Comondú.

*Range*.—Middle Lower California from latitude 26° to 28°; accidental (in winter) in the Cape San Lucas region (San José del Cabo, Jan. 21, 1883).

**\**Geothlypis beldingi beldingi* Ridgway. BELDING'S YELLOW-THROAT.**

*Geothlypis beldingi* Ridgway, Proc. U. S. Nat. Mus., 5, p. 344, Sept., 1882—San José del Cabo, Lower California (type in U. S. National Museum); Belding, l.c., 5, p. 546, 1883—San José, Miraflores, Agua Caliente, and canyons of Miraflores and Santiago peaks; Bryant, Zoe, 2, p. 192, 1891—San José del Cabo; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 679, 1902—part, Cape San Lucas district (San José, La Paz); Brewster, Bull. Mus. Comp. Zool., 41, p. 187, 1902—Cape region (plumages); Townsend, Bull. Amer. Mus. N. H., 48, p. 23, 1923—San José del Cabo and Miraflores.

*Geothlypis beldingi beldingi* Grinnell, Univ. Calif. Pub. Zool., 32, p. 205, 1928—Cape district of Lower California.

*Range*.—Cape district of Lower California.

8: Lower California (Todos Santos, 4; unspecified, 4).

<sup>1</sup> The range of this form is very little known and may be much more extensive than here indicated. The five specimens examined, except one from Jalapa, all lack definite localities, being simply marked "Mexico."

<sup>2</sup> *Geothlypis beldingi goldmani* Oberholser: Similar to *G. b. beldingi*, but male, with the upper surface much duller, more brownish or grayish (less yellowish) throughout; crown behind the black mask largely or wholly grayish or whitish instead of yellow; yellow of under parts somewhat lighter and confined to throat and breast; lower abdomen white or whitish, instead of mainly deep yellow, as in *G. b. beldingi*; sides and flanks paler and more grayish; female with upper parts and sides of the head paler, more grayish; yellow of under parts paler and confined to throat and chest, the abdomen being dull whitish, slightly or not at all washed with yellowish; sides and flanks more grayish.

Birds from Comondú tend in the direction of *G. b. beldingi* (Oberholser, l.c.).

***Geothlypis flavovelata* Ridgway.<sup>1</sup> ALTAMIRA YELLOW-THROAT.**

*Geothlypis flavovelatus* Ridgway, Proc. U. S. Nat. Mus., 18, p. 119, 1896—Altamira, near Tampico, Tamaulipas (type in U. S. National Museum); Richmond, I.c., 18, p. 631, 1896—Altamira.

*Geothlypis flavovelata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 680, 1902—Altamira.

*Geothlypis flaviceps* Nelson, Auk, 16, p. 31, 1899—Altamira, near Tampico, Tamaulipas (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 680, 1902—Altamira; Todd, Auk, 28, p. 247 (note), 1911 (crit.).

**Range.**—Marshes along coast lagoons near Tampico in southern Tamaulipas and northern Vera Cruz, eastern Mexico.

***Geothlypis chapalensis* Nelson.<sup>2</sup> CHAPALA YELLOW-THROAT.**

*Geothlypis chapalensis* Nelson, Proc. Biol. Soc. Wash., 16, p. 156, 1903—Ocotlan, Jalisco, Mexico (type in U. S. National Museum).

**Range.**—Fresh-water marshes along lower Lerma River and eastern border of Lake Chapala (from near La Barca to Ocotlan) in State of Jalisco, western Mexico.

**\**Geothlypis rostrata*<sup>3</sup> *rostrata* Bryant. BRYANT'S YELLOW-THROAT.**

*Geothlypis rostratus* Bryant, Proc. Bost. Soc. N. H., 11, p. 67, 1867—Nassau, New Providence (cotypes in U. S. National Museum and Museum of

<sup>1</sup>*Geothlypis flavovelata* Ridgway seems to be nearly related to *G. beldingi*, but to differ by much smaller size. It was originally based on a single male obtained in winter (December). Specimens secured in April and May at Altamira were separated as *G. flaviceps*, but the describer now admits that the names are synonymous.

Not having met with the species, I am unable to say anything definite on its relationship and rank.

<sup>2</sup>*Geothlypis chapalensis* Nelson: "Pattern of coloration as in *G. melanops*, but black mask extends higher up on forehead; light area bordering black mask yellow; upper parts olive green; under parts richer yellow; culmen, tail, and tarsus longer. In fresh plumage the brown on crown and nape hides the basal yellow of the feathers, but as the plumage becomes worn the brown gradually disappears, and the yellow band on crown broadens until in one of our series of eleven specimens the crown and nape are entirely yellow (much as in *G. flaviceps*)." (Nelson, I.c.).

From this account it results that *G. chapalensis* has no relation to the *G. trichas* group (of which *G. melanops* is a member), but clearly belongs in the vicinity of *G. flavovelata*. The chief difference separating it from the latter appears to be its larger size (wing, 61 against 51–56; tail, 63 against 49–53), but whether there are any other points of distinction I am unable to say for lack of material.

<sup>3</sup>The affinities of the Bahaman group of yellow-throats need more thorough investigation than I can at present bestow on the subject, though I feel inclined to agree with Mr. Todd that *G. rostrata* is possibly more nearly related to the Mexican "species" (*G. beldingi*, *G. flavovelata*, and *G. chapalensis*) than to the North American *G. trichas*. Yet without a better understanding of the Mexican representatives of the genus further speculations as to its probable origin seem, to say the least, futile.

Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 360, 1930; Cory, Bds. Bahama Is., p. 73, 1880—New Providence; idem, Cat. W. Ind. Bds., p. 156, 1892—New Providence and Andros (crit.); Bonhote, Ibis, 1899, p. 510—Nassau (crit.).

*Geothlypis trichas* var. *rostrata* Ridgway, Amer. Journ. Sci., 4, p. 458, 1872—New Providence (diag.); idem, in Baird, Brewer, and Ridgway, Hist. N. Amer. Bds., 1, p. 296, 1874—New Providence.

*Geothlypis rostrata* Sharpe, Cat. Bds. Brit. Mus., 10, p. 355, 1885—Bahamas (ex Cory); Cory, Auk, 3, p. 43, 1886—New Providence (descr.); idem, Bds. West Ind., p. 57, 1889—New Providence; Northrop and Allen, Auk, 8, p. 68, 1891—Andros (crit.); Ridgway, Auk, 8, p. 335, 1891—New Providence; Bangs, Auk, 17, p. 290, 1900—Nassau (crit.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 674, 1902—New Providence (monog.); Bonhote, Ibis, 1903, p. 283—Nassau (crit.); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—New Providence.

*Geothlypis rostrata rostrata* Todd, Auk, 28, pp. 246, 247, 1911—New Providence and Andros (crit., synon.); idem and Worthington, Ann. Carnegie Mus., 7, pp. 438, 462, 1911—New Providence (Blue Hills) and Andros (Staniard Creek) (crit., habits).

*Geothlypis maynardi* Bangs, Auk, 17, p. 290, 1900—Nassau, New Providence (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 360, 1930); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 676, 1902—New Providence (monog.); Riley, Auk, 22, p. 358, 1905—New Providence; idem, in Shattuck, The Bahama Islands, p. 367, 1905—New Providence.

*Geothlypis exigua* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 677, 1902—Fresh Creek, Andros (type in coll. of G. S. Miller, Jr., now in British Museum); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—Andros.

*Geothlypis flavida* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 678, 1902—Nassau, New Providence (type in coll. of G. S. Miller, Jr., now in British Museum); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—New Providence and Andros.

*Geothlypis coryi* (not of Ridgway) Bangs, Auk, 17, p. 291, 1900—Nassau, New Providence (one spec., July 7, 1897; crit.).

**Range.**—Islands of New Providence and Andros, Bahamas.<sup>1</sup>

24: Bahamas (New Providence, 17; Andros, 7).

<sup>1</sup> There is considerable divergency among ornithologists as to the significance of certain variations observable in specimens from the same island. While Ridgway distinguished not less than three "species" occurring side by side on the island of New Providence, Mr. Todd, in a very able paper, came to the conclusion that the differences are wholly due to age and wear, thus supporting Bonhote's contention that there was only one yellow-throat found on any one island. Upon independent investigation of the problem I can but fully sustain this view in spite of Mr. Bangs's subsequent objections. The birds with bright yellowish olive back and deep yellow under parts (*G. maynardi*) appear to represent the fully adult plumage, those with duller greenish dorsal surface, paler yellow under parts, and more or less buffy flanks (*G. rostrata*) the first annual plumage. The type of *G. flavida*, which we have examined in the British Museum, is certainly

**\**Geothlypis rostrata tanneri* Ridgway.<sup>1</sup> TANNER'S YELLOW-THROAT.**

*Geothlypis tanneri* Ridgway, Auk, 3, p. 335, 1886—Abaco Island, Bahamas (type in U. S. National Museum); Jennings, Johns Hopkins Univ. Circulars, 7, No. 63, p. 39, 1888—Joe's Cay, Little Abaco; Cory, Bds. West Ind., p. 287, 1889—Abaco (ex Ridgway); idem, Auk, 8, p. 297, 1891—Abaco; Ridgway, Auk, 8, p. 334, 1891—Abaco; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 676, 1902—Abaco and (?) Great Bahama (monog.); Bonhote, Ibis, 1903, p. 285—Little Abaco (crit.); Allen, Auk, 22, p. 131, 1905—Great Bahama, Moraine Cay, Abaco, and Elbow Cay; Riley, Auk, 22, p. 358, 1905—Abaco; idem, in Shattuck, The Bahama Islands, p. 367, 1905—Abaco, Little Abaco(?), and Great Bahama(?).

*Geothlypis rostratus tanneri* Cory, Auk, 8, p. 350, 1891—Great Bahama and Abaco.

*Geothlypis rostrata tanneri* Todd, Auk, 28, pp. 246, 250, 1911—Abaco, Moraine Cay, Great Bahama, and Little Abaco (crit.); idem and Worthington, Ann. Carnegie Mus., 7, pp. 438, 462, 1911—Abaco (crit., habits).

*Geothlypis incompta* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 677, 1902—Abaco (type in U. S. National Museum); Riley, Auk, 22, p. 359, 1905—Abaco; idem, in Shattuck, The Bahama Islands, p. 367, 1905—Abaco.

**Range.**—Islands of Great Bahama, Moraine Cay, Little Abaco, Abaco, and Elbow Cay, Bahamas.

14: Bahamas (Great Bahama, 11; Abaco, 3).

**\**Geothlypis rostrata coryi* Ridgway.<sup>2</sup> CORY'S YELLOW-THROAT.**

*Geothlypis coryi* Ridgway, Auk, 3, p. 334, 1886—Eleuthera Island, Bahamas (type in U. S. National Museum); idem, Auk, 8, p. 336, 1891—Eleuthera; Cory, Auk, 8, p. 351, 1891—Eleuthera; Ridgway, Bull. U. S. Nat. Mus.,

nothing but an unusually brightly colored individual of the New Providence form, verging somewhat in the direction of *G. r. tanneri*.

Birds from Andros (*G. exigua*), when compared with those from New Providence, average slightly smaller and have generally, though not constantly, shorter bills, but whether this insignificant variation deserves nomenclatural recognition remains to be substantiated by more adequate material.

<sup>1</sup>*Geothlypis rostrata tanneri* Ridgway: Closely similar to *G. r. rostrata*, but adult males with crown more greenish (less suffused with grayish); superciliary streak decidedly yellow; back and flanks more brownish (less greenish) olive.

In this form again two color types exist, the one with duller upper parts, paler yellow lower surface, and buffy grayish brown flanks (*G. incompta*) corresponding to "*G. rostrata*" in the New Providence population, considered to represent the first annual plumage.

Birds from Great Bahama seem to be exactly like those from Abaco.

<sup>2</sup>*Geothlypis rostrata coryi* Ridgway: Nearest to *G. r. tanneri*, but even more brightly colored; crown decidedly yellowish green without any trace of gray; superciliary streak bright yellow; back fresh yellowish green; flanks greenish yellow (as in "*G. maynardi*").

That the dull-colored, buff-bellied stage has not yet been found on Eleuthera is very likely due to the fact that so few specimens from that island exist in collections.

50, Part 2, p. 677, 1902—Eleuthera (monog.); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—Eleuthera.

*Geothlypis rostrata coryi* Todd, Auk, 28, pp. 246, 252, 1911—Eleuthera (crit.).

*Range*.—Island of Eleuthera, Bahamas.

6: Bahamas (Eleuthera, 6).

**\**Geothlypis aequinoctialis velata* (Vieillot). DUFRESNE'S  
MASKED YELLOW-THROAT.**

*Sylvia velata* Vieillot, Hist. Nat. Ois. Amér. Sept., 2, p. 22, pl. 74, "1807"—no locality indicated<sup>1</sup> (type in coll. of M. Dufresne, now in Edinburgh Museum; cf. Stenhouse, Nov. Zool., 35, p. 271, 1930); Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 20, 1837—Brazil and Bolivia; d'Orbigny, Voy. Amér. Mérid., Ois., p. 217, "1838"—Rio de Janeiro, Corrientes, and Chiquitos, Bolivia (spec. in Paris Museum examined).

*Sylvia trichas* (not *Turdus trichas* Linnaeus) Wied, Reise Bras., 1, p. 297, 1830—Caravellas to Rio Grande del Belmonte, Bahia.

*Sylvia canicapilla* (not *Tanagra canicapilla* Swainson) Wied, Beitr. Naturg. Bras., 3, (2), p. 701, 1831—eastern Brazil.

*Geothlypis canicapilla* Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 115, 1885—Taquara, Rio Grande do Sul; Stempelmann and Schulz, Bol. Acad. Nac. Cienc. Cordoba, 10, p. 398, 1890—Cordoba.

*Trichas velata* Burmeister, Syst. Uebers. Th. Bras., 3, p. 115, 1856—Nova Friburgo, Rio, and Congonhas, Minas Geraes; Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Rio de Janeiro, Ypanema, Cimiterio, Itararé, Rio Paraná, and Curytiba (spec. examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 445—Minas Geraes (Sete Lagoas, Uberaba, Lagoa Santa).

*Geothlypis velata* Baird, Rev. Amer. Bds., 1, p. 223, 1865—Bahia and Santa Catharina (monog.); Slater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 139—Conchitas, Buenos Aires; Pelzeln, Nunq. Otios., 2, p. 291, 1874—Nova Friburgo; Cabanis, Journ. Orn., 22, p. 82, 1874—Cantagallo; Slater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 16—Huiro and Maranura, Peru; idem, l.c., 1879, p. 594—Chiquitos, Bolivia; White, l.c., 1882, p. 594—Orán, Salta; Barrows, Bull. Nutt. Orn. Cl., 8, p. 87, 1883—Concepción del Uruguay, Entre Rios; Taczanowski, Orn. Pér., 1, p. 469, 1884—Huiro and Maranura; Sharpe, Cat. Bds. Brit. Mus., 10, p. 363, pl. 9, fig. 5, 1885 (monog.); Slater and Hudson, Arg. Orn., 1, p. 20, 1888—Argentina; Allen, Bull. Amer. Mus. N. H., 3, p. 344, 1891—Corumbá and Chapada, Matto Grosso; Kerr, Ibis, 1892, p. 123—Fortín Page, lower Pilcomayo; Aplin, Ibis, 1894, p. 165—Santa Ana, Uruguay; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 4, 1897—Aguaienda and Caiza, Bolivian Chaco; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Rio Grande do Sul (Mundo Novo, São Lourenço); idem, Rev. Mus. Paul., 3, p. 134, 1899—São Paulo (Ypiranga, Iguapé); idem, l.c., 4, p. 152, 1900—Cantagallo and Nova Friburgo; Euler, l.c., 4, p. 14,

<sup>1</sup> Rio de Janeiro, Brazil, has been suggested as type locality by Mrs. Naumburg (Bull. Amer. Mus. N. H., 60, p. 339, 1930).

1900 (nest descr.); Kerr, Ibis, 1901, p. 223—Concepción Island, Paraguay; Lönnberg, Ibis, 1903, p. 470—Fortín Creveaux, Bolivian Chaco; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 173, 1902—Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tucumán; Baer, Ornith., 12, p. 214, 1904—Santa Ana and Criolla, Tucumán; Chubb, Ibis, 1910, p. 617—Sapucay, Paraguay; Grant, Ibis, 1911, p. 88—Paraguay (Puerto Pinasco, Curuzú Chica) and Corrientes (Bella Vista).

*Geothlypis aequinoctialis* (not *Molacilla aequinoctialis* Gmelin) Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 6—Chirimoto, Peru.

*Geothlypis cucullata* (not *Sylvia cucullata* Latham<sup>1</sup>) Richmond, Auk, 17, p. 179, 1900 (crit.).

*Geothlypis aequinoctialis cucullata* Ihering, Cat. Faun. Braz., 1, p. 332, 1907—São Paulo (Ypiranga, Iguapé, São Sebastião, Itapura, Ubatuba, Rio Feio, Itararé, Avandava), Minas Geraes (Marianna), and Argentina (Las Palmas); Hellmayr, Nov. Zool., 15, p. 18, 1908—Goyaz; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 368, 1910 (range in Argentina); idem, l.c., 23, p. 347, 1912—Villa Rica, Paraguay; Bertoni, Faun. Parag., p. 60, 1914—Alto Paraná, Paraguay; Chapman, Bull. U. S. Nat. Mus., 117, p. 106, 1921—Idma and Santa Ana, Peru (crit.); Tremoleras, El Hornero, 2, p. 22, 1920—Uruguay (Montevideo, Canelones, San José, Flores); Serié and Smyth, l.c., 3, p. 52, 1923—Santa Elena, Entre Rios; Pereyra, l.c., 3, p. 170, 1923—Prov. Buenos Aires (Campana, San Isidro, Zelaya); Marelli, Mem. Min. Obr. Publ. for 1922–23, p. 656, 1924—Prov. Buenos Aires; Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 185, 1926—Fazenda Ferreira and Candido de Abreu, Paraná; Holt, Bull. Amer. Mus. N. H., 57, p. 314, 1928—Bemfica and Monte Serrat, Itatiaya.

*Geothlypis aequinoctialis velata* Oberholser, Proc. U. S. Nat. Mus., 25, p. 142, 1902—Sapucay, Paraguay; Hartert and Venturi, Nov. Zool., 16, p. 166, 1909—Barracas al Sud, Buenos Aires (eggs descr.); Hellmayr, l.c., 28, p. 243, 1921—Rio de Janeiro and Corrientes (crit.); Giacomelli, El Hornero, 3, p. 67, 1923—La Rioja; Wetmore, Bull. U. S. Nat. Mus., 133, p. 370, 1926—Chaco (Las Palmas), Formosa (Riachó Pilaga, Formosa), Uruguay (Lazcano, Rio Negro), and Tucumán (Tapia); Friedmann, Bull. Mus. Comp. Zool., 68, p. 216, 1927—Concepción (Tucumán) and Bovril Islands (Santa Fé); Naumburg, Bull. Amer. Mus. N. H., 60, p. 339, 1930—Matto Grosso (range); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 310, 1930—Villa Montes, Tarija, Bolivia.

*Geothlypis canicapilla assimilis* Berlepsch and Stolzmann, Ornith., 13, p. 75, 1906—Chirimoto and Santa Ana, Peru (type, from Chirimoto, in the Berlepsch Collection, now in the Frankfurt Museum, examined); Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 163, 1927 (crit.).

<sup>1</sup> *Sylvia cucullata* Latham (Ind. Orn., 2, p. 528, 1790), based on a specimen in the collection of D. Parkinson, seems to me unidentifiable. The description, "S. virens subtus flava, fronte genisque nigris, cauda cuneiformi," might apply with equal certainty to *G. a. aequinoctialis* or some other species of the genus. The case being still further obscured by the absence of any locality, it appears preferable to adhere to the subspecific name *velata*, the type of which exists, rather than revive a term of questionable pertinence, inasmuch as Latham makes no reference to the gray crown that is so conspicuous a feature in both *velata* and *aequinoctialis*.

*Geothlypis aequinoctialis peruviana* Taczanowski, Orn. Pér., 1, p. 471, 1884—part, Chirimoto.

*Range*.—Northern Argentina south to La Rioja, Cordoba, Buenos Aires, and Entre Rios; Uruguay; Paraguay; southern half of Brazil north to Bahia, Goyaz, and Matto Grosso; eastern Bolivia; eastern Peru (Urubamba Valley and Chirimoto, valley of Huayabamba).<sup>1</sup>

23: Brazil (Joinville, Santa Catharina, 2; Baurú, São Paulo, 1; Therezopolis, Rio de Janeiro, 2; Rio das Velhas, near Lagôa Santa, Minas Geraes, 2; Chapada, Matto Grosso, 3; Descalvados, Matto Grosso, 1; Veadeiros, Goyaz, 1; São Marcello, Rio Preto, Bahia, 1); Uruguay (eight miles southwest of Treinta y Tres, 1; Rio Uruguay, southwest of Dolores, Dept. Soriano, 2; fifteen miles north of San Vicente de Castillos, Dept. Rocha, 2); Argentina (Concepción, Tucumán, 2; El Carrizal, Sierra de Cordoba, 1; Puerto Segundo, Misiones, 2).

**\**Geothlypis aequinoctialis aequinoctialis* (Gmelin). EQUINOCTIAL MASKED YELLOW-THROAT.**

*Molacilla aequinoctialis* Gmelin, Syst. Nat., 1, (2), p. 972, 1789—based on "Figuier olive de Cayenne" Buffon and Daubenton, Pl. Enl., pl. 685, fig. 1 (=female).

*Sylvia delafieldii* Audubon, Orn. Biogr., 5, p. 308, 1839—"California," errore (type in U. S. National Museum; cf. Baird, Rev. Amer. Bds., 1, p. 225, 1865, and Grinnell, Univ. Calif. Pub. Zool., 38, p. 322, 1932).

*Geothlypis velata* (not *Sylvia velata* Vieillot) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 666, "1848" [=1849]—British Guiana.

*Trichas velatus*(a) Léotaud, Ois. Trinidad, p. 183, 1866—Trinidad; Pelzeln, Orn. Bras., 2, p. 71, 1868—part, Forte do Rio Branco, Brazil (spec. examined).

<sup>1</sup> I am unable to appreciate any local variation of sufficient constancy to justify further subdivision of this form. Two adult males from the Urubamba Valley, Peru, appear to me indistinguishable from various individuals picked at random from among a good Brazilian series. Even the alleged differences in size (smaller bill and longer tail) do not hold. The type of *G. c. assimilis*, from Chirimoto, as claimed by the describers, has the gray cap indeed more restricted, though it is closely approached in that respect by one or two males from eastern Brazil. Whether the race of the Huayabamba Valley merits recognition remains, of course, to be determined by an adequate series. It may be added, however, that, the Chirimoto bird being designated as type in the original description, Messrs. Sztolcman and Domaniewski had no right to select as such a specimen from Santa Ana in the Warsaw Museum.

*Additional material examined*.—Brazil: Bahia, 3; Victoria, Espirito Santo, 1; Rio de Janeiro, 5; Agua Suja, near Bagagem, Minas Geraes, 2; São Paulo (Ypanema, Itararé, Rio Paraná, etc.), 6; Curytiba, Paraná, 1; Rio Grande do Sul, 1.—Argentina: Corrientes, 1; Barracas al Sud, Buenos Aires, 2; Tucumán, 3.—Bolivia: Villa Montes, Tarija, 2.—Peru: Maranura, 1; Santa Ana, 1; Chirimoto, 1.

*Geothlypis aequinoctialis* Cabanis, Mus. Hein., 1, p. 16, 1851—Cayenne; Sclater, Cat. Coll. Amer. Bds., p. 27, 1862—Cayenne and Trinidad; Taylor, Ibis, 1864, p. 81—Trinidad; Baird, Rev. Amer. Bds., 1, p. 224, 1865—Trinidad (crit.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1867, p. 569—Mexiana Island, Brazil; idem, l.c., 1868, p. 627—Caracas, Venezuela; idem, l.c., 1869, p. 252—Maruria, Lake Valencia, Venezuela; Sharpe, Cat. Bds. Brit. Mus., 10, p. 360, pl. 9, fig. 7, 1885—Mexiana Island, British Guiana (Yuruani River, Demerara), Cayenne, Venezuela (Caracas), Trinidad, and Colombia (Bogotá); Salvin, Ibis, 1885, p. 203—Yuruani River, British Guiana; Chapman, Bull. Amer. Mus. N. H., 6, p. 24, 1894—La Brea and Moruga Road, Trinidad; Berlepsch and Hartert, Nov. Zool., 9, p. 11, 1902—Quiribana de Caicara, Altagracia, and Perico, Orinoco River, Venezuela; Hagmann, Zool. Jahrb. (Syst.), 26, p. 25, 1907—Mexiana; Berlepsch, Nov. Zool., 15, p. 108, 1908—Cayenne, Approuague, and Roche-Marie, French Guiana; Beebe, Zoologica (N.Y.), 1, p. 100, 1909—near La Brea, Orinoco Delta, Venezuela; Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 208, 1913—Manimo River, Venezuela; Snethlage, Bol. Mus. Goeldi, 8, p. 482, 1914—Santo Antonio do Prata, Rio Xingú (Victoria), and Mexiana Island, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 152, 1916—La Cascabel, Las Guacas, Altagracia, and Quiribana de Caicara, Orinoco Valley, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 548, 1917—Puerto Berrio (Magdalena Valley) and Villavicencio, Colombia; Chubb, Bds. Brit. Guiana, 2, p. 409, 1921—British Guiana; Williams, Bull. Dept. Agric. Trin. Tob., 20, p. 127, 1922—La Fortunée and Harmony Hall, Trinidad; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 173, 1928—Pará.

*Trichas aequinoctialis* Finsch, Proc. Zool. Soc. Lond., 1870, p. 565—Trinidad (crit.).

*Geothlypis aequinoctialis aequinoctialis* Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, pp. 99, 118, 1912—Mexiana Island.

*Tanagra canicapilla* Swainson, Zool. Illust., (1), 3, pl. 174,<sup>1</sup> 1823—"West Indies," probably Trinidad (location of type not stated).

**Range.**—Island of Trinidad; the Guianas; northeastern Brazil, from the Rio Branco south to the Pará region (Santo Antonio do Prata, Pará) and the lower Xingú (Victoria); Venezuela; eastern Colombia (Villavicencio, eastern base of eastern Andes; Puerto Berrio, Magdalena Valley).<sup>2</sup>

18: British Guiana (unspecified, 2); Venezuela (Macuto, Caracas, 2; Encontrados, Zulia, 9; Rio Catatumbo, Zulia, 4; Colón, Tachira, 1).

<sup>1</sup> An excellent representation of the Guianan race with greenish (not gray) supra-auricular region.

<sup>2</sup> Additional material examined.—Trinidad: Caroni River, 1; Caparo, 2; Carenage, 10.—French Guiana: Cayenne, 6; Roche-Marie, 1; Approuague, 2.—Brazil: Forte do Rio Branco, 2; Mexiana Island, 5; Santo Antonio do Prata, Pará, 1; Victoria, Rio Xingú, 3.—Venezuela: Altagracia, 2; Quiribana de Caicara, 2.—Colombia: "Bogotá," 2.



**\**Geothlypis aequinoctialis peruviana* Taczanowski.<sup>1</sup> PERUVIAN MASKED YELLOW-THROAT.**

*Geothlypis aequinoctialis peruviana* Taczanowski, Orn. Pér., 1, p. 471, 1884—part, Callacate, Peru (type in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 164, 1927).

*Geothlypis peruviana* Salvin, Nov. Zool., 2, p. 3, 1895—Succha and Chusgon, Huamachuco, Marañón Valley, Peru (crit.).

*Geothlypis aequinoctialis* (not *Motacilla aequinoctialis* Gmelin) Taczanowski, Proc. Zool. Soc. Lond., 1880, p. 191—Callacate.

*Geothlypis auricularis* (not of Salvin) Sharpe, Cat. Bds. Brit. Mus., 10, p. 361, 1885—part (syn. *G. a. peruviana*).

**Range.**—Northern Peru, in the upper Marañón Valley (Callacate, Hacienda Limón, Succha, Chusgon, Huamachuco).

1: Peru (Hacienda Limón, ten miles west of Balsas, 1).

***Geothlypis aequinoctialis auricularis* Salvin. PACIFIC MASKED YELLOW-THROAT.**

*Geothlypis auricularis* Salvin, Proc. Zool. Soc. Lond., 1883, p. 420—Callao, Peru (type in Salvin-Godman Collection, now in British Museum); Taczanowski, Orn. Pér., 1, p. 470, 1884—Chepen, Guadalupe, Tumbes, and Callao, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 361, pl. 9, fig. 8, 1885—part, Callao; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1892, p. 374—Lima, Peru (crit.); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 8, 1899—Vinces, Ecuador.

*Geothlypis aequinoctialis auricularis* Chapman, Bull. Amer. Mus. N. H., 55, p. 596, 1926—Bucay, Huigra, Chone, and Portovelo, Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, (2), 4, p. 234, 1932—Isla Silva, Rio Babahoyo, Ecuador.

*Geothlypis poliocephala* (not of Baird) Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 319—Tumbes, Peru; idem, l.c., 1880, p. 191—Chepen, Peru.

*Geothlypis aequinoctialis* (not *Motacilla aequinoctialis* Gmelin) Sclater, Proc. Zool. Soc. Lond., 1867, p. 340—Lima.

**Range.**—Pacific slope (tropical zone) of Peru, from Lima northward, and southwestern Ecuador north to Chone.<sup>2</sup>

***Geothlypis aequinoctialis chiriquensis* Salvin.<sup>3</sup> CHIRIQUI MASKED YELLOW-THROAT.**

<sup>1</sup>*Geothlypis aequinoctialis peruviana* Taczanowski: Very close to *G. a. auricularis*, but larger with shorter bill; gray of pileum paler; the black facial mask less extensive; the green of the back lighter. Wing (adult male), 65; tail, 60.

Two specimens from Callacate and Succha respectively, the only adult males that we have been able to examine, seem to corroborate the distinctness of the Marañón Valley form.

<sup>2</sup>Two adults from Vinces, Ecuador, are apparently inseparable from three Lima specimens.

<sup>3</sup>*Geothlypis aequinoctialis chiriquensis* Salvin, in general coloration, resembles *G. a. velata*, but differs by broader black frontal band, greater extent of black on

*Geothlypis chiriquensis* Salvin, Ibis, (3), 2, p. 148, 1872—Chiriquí, Panama (type in Salvin-Godman Collection, now in British Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 152, pl. 9, fig. 1, 1881—Volcan de Chiriquí; Sharpe, Cat. Bds. Brit. Mus., 10, p. 362, pl. 9, fig. 6, 1885—Volcan de Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 681, 1902—Volcan de Chiriquí.

*Range*.—Western Panama (Volcan de Chiriquí).

**\**Geothlypis semiflava semiflava* Sclater. FRASER'S YELLOW-THROAT.**

*Geothlypis semiflava* Sclater, Proc. Zool. Soc. Lond., 28, p. 273, 1860—Babahoyo, Ecuador (type in coll. of P. L. Sclater, now in British Museum);<sup>1</sup> idem, l.c., p. 291, 1860—Esmeraldas, Ecuador; idem, Cat. Coll. Amer. Bds., p. 27, 1862—Babahoyo and Esmeraldas; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—Chimbo; idem, l.c., 1884, p. 287—El Placer, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 357, 1885—part, Ecuador (Esmeraldas, "Quito," Babahoyo, Intag); Hartert, Nov. Zool., 5, p. 479, 1898—Paramba, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 8, 1899—Vinces, Ecuador; Goodfellow, Ibis, 1901, p. 314—San Nicolas, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 547, 1917—Los Cisneros, Caldas, Ricaurte, Buenavista (Nariño), and Cali, Colombia.

*Geothlypis semiflava semiflava* Chapman, Bull. Amer. Mus. N. H., 55, p. 595, 1926—Esmeraldas, Manaví, Bucay, Chimbo, Naranjo, and Portovelo, Ecuador.

*Range*.—Tropical zone of western Ecuador and western Colombia, extending east into the Cauca Valley (Cali).<sup>2</sup>

5: Ecuador (Puente de Chimbo, 5).

**\**Geothlypis semiflava bairdi* Nutting.<sup>3</sup> BAIRD'S YELLOW-THROAT.**

*Geothlypis bairdi* Nutting, Proc. U. S. Nat. Mus., 6, p. 398, 1884—Los Sábalos, Nicaragua (type in U. S. National Museum); Ridgway, l.c., 10, p. 585,

the sides of the head, and by the restriction of the gray color to the occiput, the hind crown and nape being greenish like the back.

*Material examined*.—Panama: Volcan de Chiriquí, 1.

<sup>1</sup> Although the "Catalogue of the Birds in the British Museum" lists an adult male from Esmeraldas as type, both in the original description and the "Catalogue of a Collection of American Birds" the type is stated by Sclater to be from Babahoyo. There can be little doubt, I believe, that spec. e, Babahoyo, is the actual type, the only specimen obtained at that place by Fraser.

<sup>2</sup> Two specimens from Cali, Colombia, seem to agree with an Ecuadorian series.

*Material examined*.—Ecuador: Paramba, 8; Ventana, 1; San Nicolas, 2; El Placer, 1; Chimbo, 3.—Colombia: Cali, 2.

<sup>3</sup> *Geothlypis semiflava bairdi* Nutting: Differs from the typical race by deeper coloration, the upper parts being dark citrine rather than citrine, while the under surface is less purely yellow with more extensive olivaceous shading on chest and sides. The wings are slightly shorter (55–59 against 58–62), and the bill generally rather stouter.

1885—Segovia River, Honduras; Cherrie, l.c., 14, p. 527, 1891—Costa Rica (crit.); Richmond, l.c., 16, p. 485, 1893—Costa Rica (Rio Frio) and Nicaragua (Greytown, Rio San Juan, Rio Escondido).

*Geothlypis semiflava bairdi* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 682, 1902—southern Honduras to Costa Rica (monog.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 276, 1910—Guayábo, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 804, 1910—Caribbean side of Costa Rica (many localities); Rendahl, Ark. Zool., 12, No. 8, p. 35, 1919—San Juan del Norte, Nicaragua; Kennard and Peters, Proc. Bost. Soc. N. H., 38, p. 460, 1928—Almirante, Panama; Peters, Bull. Mus. Comp. Zool., 71, p. 337, 1931—Chinguinola, Almirante, and Isla Grande, Panama.

*Geothlypis semiflava* (not of Sclater) Sharpe, Cat. Bds. Brit. Mus., 10, p. 367, 1885—part, "Costa Rica."

*Range*.—Caribbean side of southern Honduras (Segovia River), Nicaragua (Los Sábalos, Greytown, Rio San Juan, Rio Escondido), Costa Rica, and extreme northwestern Panama (Almirante Bay region).

10: Costa Rica (Boca Rio Matina, 3; Guayábo, 2; Limón, 4; Peralta, 1).

\**Geothlypis speciosa* Sclater.<sup>1</sup> ORIZABA YELLOW-THROAT.

*Geothlypis speciosa* Sclater, Proc. Zool. Soc. Lond., 26, p. 447, 1858—Mexico, probably Orizaba, Vera Cruz (types in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 27, 1862—Mexico; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—mountains of Orizaba; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 152, 1881—Orizaba; Sharpe, Cat. Bds. Brit. Mus., 10, p. 358, pl. 10, 1885—Mexico; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 683, 1902—Mexico (monog.).

*Geothlypis formosa* (lapsu) Sclater, Proc. Zool. Soc. Lond., 28, p. 273, 1860—Mexico.

*Range*.—Eastern Mexico, in State of Vera Cruz (Orizaba).

1: Mexico (San Mateo, 1).

*Geothlypis nelsoni nelsoni* Richmond.<sup>2</sup> HOODED YELLOW-THROAT.

<sup>1</sup>*Geothlypis speciosa* Sclater, while not unlike *G. s. bairdi* in general appearance, differs nevertheless very markedly by much smaller bill with nearly blackish lower mandible; more brownish (near orange citrine) upper parts with brownish gray apical margins to the dorsal feathers; deeper yellow lower surface; strong brownish buff suffusion on breast and sides, etc.

Very little is on record concerning its range. The typical examples were collected by de Saussure, while Sumichrast refers to a specimen from near Orizaba in Botteri's collection. The adult male (in fresh plumage) in Field Museum was obtained by W. W. Brown at San Mateo, presumably in the mountains of Vera Cruz.

<sup>2</sup>This species, autoptically unknown to the writer, is stated by the late W. De W. Miller to share the proportion of the tail with the group separated by Ridgway under the generic name *Chamaethlypis*.

*Oeothlypis cucullata* (not *Sylvia cucullata* Latham)<sup>1</sup> Salvin and Godman, Ibis, (6), 1, p. 237, 1889—Cofre de Perote, near Jalapa, Vera Cruz, Mexico (types in Salvin-Godman Collection, now in British Museum).

*Geothlypis nelsoni* Richmond, Auk, 17, p. 197, 1900—new name for *G. cucullata* Salvin and Godman; Miller, Auk, 36, pp. 290, 291, 1919 (crit.).

*Geothlypis nelsoni nelsoni* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 685, 1902—southeastern Mexico (monog.).

*Range*.—Southeastern Mexico, in states of Vera Cruz (Jalapa, Cofre de Perote, Jico) and Puebla (Chalchicomula).

***Geothlypis nelsoni microrhyncha* Ridgway. HIDALGO YELLOW-THROAT.**

*Geothlypis nelsoni microrhyncha* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 685, 1902—Real del Monte, Hidalgo, Mexico (type in U. S. National Museum).

*Range*.—Southern Mexico, in State of Hidalgo (Real del Monte, Tulancingo).

**Genus CHAMAETHLYPIS Ridgway<sup>2</sup>**

*Chamaethlypis* Ridgway, Man. N. Amer. Bds., p. 525, 1887—type, by orig. desig., *Geothlypis poliocephala* Baird.

**\**Chamaethlypis poliocephala poliocephala* (Baird). RIO GRANDE YELLOW-THROAT.**

*Geothlypis poliocephala* Baird, Rev. Amer. Bds., 1, p. 225, April, 1865—part, Mazatlan, Mexico (type in U. S. National Museum); Lawrence, Mem. Bost. Soc. N. H., 2, p. 269, 1874—Mazatlan; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 154, pl. 9, fig. 3, 1881—Mazatlan; Sharpe, Cat. Bds. Brit. Mus., 10, p. 359, 1885—part, spec. b, Presidio, Mexico.

*Geothlypis poliocephala* var. *poliocephala* Ridgway, Amer. Journ. Sci., 4, p. 459, 1872 (crit.).

*Geothlypis poliocephala palpebralis* (not of Ridgway) Allen, Auk, 8, p. 316, 1891—Brownsville, Texas, and Aldema, Tamaulipas.

*Geothlypis poliocephala ralphii* Ridgway, Proc. U. S. Nat. Mus., 16, p. 692, 1894—Brownsville, Texas (type in U. S. National Museum).

*Chamaethlypis poliocephala poliocephala* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 687, 1902 (monog., full bibliog.).

*Chamaethlypis poliocephala* Griscom and Crosby, Auk, 43, p. 31, 1926—Brownsville, Texas.

<sup>1</sup>*Geothlypis cucullata* should perhaps be preserved for the Hooded Yellow-throat, since *Sylvia cucullata* Latham, though probably pertaining to some species of *Geothlypis*, cannot be identified with certainty.

<sup>2</sup>A very unsatisfactory genus hardly worthy of retention. Cf. Miller, Auk, 36, pp. 290–291, 1919.

*Range*.—Lower Austral zone of the lower Rio Grande Valley, Texas, and northern and central Mexico south to Sinaloa, Michoacan, and Morelos.

1: Texas (Cameron County, 1).

***Chamaethlypis poliocephala palpebralis* Ridgway. MIRADOR  
YELLOW-THROAT.**

*Chamaethlypis palpebralis* Ridgway, Man. N. Amer. Bds., p. 526, 1887—Mirador, Vera Cruz (type in U. S. National Museum).

*Trichas delafeldi* (not *Sylvia delafeldii* Audubon) Sclater, Proc. Zool. Soc. Lond., 24, p. 293, 1856—Vera Cruz.

*Geothlypis poliocephala* (not of Baird) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 200, 1869—Mérida, Yucatan; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—upper limits of the hot region, Vera Cruz; Sharpe, Cat. Bds. Brit. Mus., 10, p. 359, pl. 9, fig. 3, 1885—part, spec. a, Mexico.

*Chamaethlypis poliocephala palpebralis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 689, 1902—southeastern Mexico from Vera Cruz to Chiapas (monog.); Peters, Auk, 30, p. 378, 1913—Camp Mengel, Quintana Roo; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Vigia Chica and Chunyaxche, Yucatan; Austin, Bull. Mus. Comp. Zool., 69, p. 389, 1929—Augustine, British Honduras; Griscom, Bull. Amer. Mus. N. H., 64, p. 337, 1932—Quiriguá, eastern Guatemala.

*Geothlypis caninucha* (not of Ridgway) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 153, 1881—part, Mexico (Mérida) and British Honduras; Sharpe, Cat. Bds. Brit. Mus., 10, p. 360, 1885—part, spec. a, British Honduras.

*Range*.—Tropical lowlands of southeastern Mexico, in states of Vera Cruz (Mirador, Vera Cruz, San Andres Tuxtla), Tabasco (Montecristo), Chiapas (Palenque, Oozucuantla), Campeche, Yucatan (Mérida, Progreso, La Vega, Chichen Itza), and Quintana Roo (Camp Mengel, Vigia Chica, Chunyaxche), British Honduras (Augustine), and eastern Guatemala (Quiriguá, Motagua Valley).

**\**Chamaethlypis poliocephala caninucha* (Ridgway). GRAY-  
NAPED YELLOW-THROAT.**

*Geothlypis poliocephala* var. *caninucha* Ridgway, Amer. Journ. Sci., 4, p. 459, Dec., 1872—Retalhuleu, western Guatemala (type in U. S. National Museum); Boucard, Proc. Zool. Soc. Lond., 1878, p. 52—San José, Costa Rica.

*Geothlypis aequinoctialis* (not *Motacilla aequinoctialis* Gmelin) Sclater and Salvin, Ibis, 1860, p. 273—Dueñas, Guatemala.

*Geothlypis poliocephala* (not of Baird) Baird, Rev. Amer. Bds., 1, p. 225, 1865—part, "Petaleuleu" [=Retalhuleu], Guatemala; Salvin, Ibis, 1870, p. 114—Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 10, p. 359, 1885—part, Guatemala and Costa Rica.

*Geothlypis caninucha* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 153, 1881—part, Guatemala (Retalhuleu, Patio Bolas, Dueñas, San Gerónimo) and Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 10, p. 360, 1885—part, spec. b-f, Guatemala (Retalhuleu, San Gerónimo, Dueñas) and Costa Rica; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Los Anonos, Costa Rica; Underwood, Ibis, 1896, p. 434—Miravalles, Costa Rica.

*Geothlypis caninucha icterotis* Ridgway, Proc. U. S. Nat. Mus., 11, p. 539, 1889—Costa Rica (type in U. S. National Museum); Cherrie, l.c., 14, p. 526, 1891—San José, Costa Rica (crit.); idem, Auk, 9, p. 22, 1892—San José (breeding); Richmond, Proc. U. S. Nat. Mus., 16, p. 485, 1893—Rio Escondido, Nicaragua.

*Geothlypis palpebralis* (not of Ridgway) Lantz, Trans. Kansas Acad. Sci., 16, p. 223, 1899—San Juan Valley, Costa Rica.

*Chamaethlypis caninucha* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 689, 1902—part, Guatemala to Costa Rica; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 130, 1907—Mazatenango and Patulul, Guatemala; Carriker, Ann. Carnegie Mus., 6, p. 803, 1910—part, San José, Miravalles, Tenorio, Bagáces, and San Pedro del Moján, Costa Rica (habits); Rendahl, Ark. Zool., 12, No. 8, p. 35, 1919—Masaya, Nicaragua; Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 334, 1932—Cantarranas, Honduras.

*Chamaethlypis poliocephala caninucha* Griscom, Bull. Amer. Mus. N. H., 64, p. 337, 1932—Guatemala (Panajachel, Lake Amatitlan, San Felipe, San José, Pantaleon, Carolina, Hacienda California, and Finca El Cipres).

*Range*.—Western Guatemala, Honduras, Nicaragua, and Costa Rica south to the plateau country near San José.<sup>1</sup>

24: Guatemala (Lake Amatitlan, 2; Mazatenango, 2; Patulul, 2); Nicaragua (Matagalpa, 1; San Gerónimo, Chinandega, 3); Costa Rica (Las Cañas, 2; Miravalles, 2; Orósi, 4; San José, 6).

### ***Chamaethlypis poliocephala ridgwayi* Griscom.<sup>2</sup> RIDGWAY'S YELLOW-THROAT.**

*Chamaethlypis poliocephala ridgwayi* Griscom, Proc. New Engl. Zool. Cl., 12, p. 7, 1930—Boruca, Costa Rica (type in Museum of Comparative Zoology, Cambridge, Mass.).

*Chamaethlypis caninucha* (not *Geothlypis poliocephala* var. *caninucha* Ridgway) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 689, 1902—part, Volcan

<sup>1</sup> Birds from the plateau region of Costa Rica (San José) verge slightly in the direction of *C. p. ridgwayi*, but the variation is not constant enough to justify the retention of a separate form (*icterotis* Ridgway). According to Griscom (l.c.), specimens from the Atlantic slope of Guatemala are intermediate to *C. p. palpebralis*, and our couple from Lake Amatitlan have indeed traces of white on the lower eyelid.

<sup>2</sup> *Chamaethlypis poliocephala ridgwayi* Griscom: Very near to *C. p. caninucha*, but under parts of a deeper, brighter yellow, in winter, and immature plumage with less buffy brown suffusion on the flanks; back slightly greener, less brownish; size somewhat smaller. Wing (adult), male, 52–55.

*Material examined*.—Costa Rica: Boruca, 10.—Panama: Boquete, 2.

de Chiriquí and Boquete, Panama; Bangs, Auk, 24, p. 306, 1907—Boruca, Paso Real, and Barranca de Térraba, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 803, 1910—part, Boruca, Costa Rica.

*Geothlypis caninucha icterotis* (not of Ridgway) Bangs, Proc. New Engl. Zool. Cl., 3, p. 61, 1902—Boquete and Volcan de Chiriquí, Panama.

**Range.**—Southwestern Costa Rica (Térraba Valley) and western Panama (Boquete, Volcan de Chiriquí).

### Genus *ICTERIA* Vieillot

*Icteria* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, pp. IV, 85, 1807—type, by monotypy, *Icteria dumicola* Vieillot=*Muscicapa viridis* Gmelin=*Turdus virens* Linnaeus.

#### \**Icteria virens virens* (Linnaeus). YELLOW-BREASTED CHAT.

*Turdus virens* Linnaeus, Syst. Nat., 10th ed., 1, p. 171, 1758—based on "Yellow-breasted Chat" Catesby, Nat. Hist. Carolina, 1, p. 50, pl. 50; "the upper parts of the country [=South Carolina], 200 or 300 miles from the sea."

*Muscicapa viridis* Gmelin, Syst. Nat., 1, (2), p. 936, 1789—based on [Brisson et Buffon ex] Catesby; South Carolina.

*Ampelis luteus* Sparrman, Mus. Carls., fasc. 3, pl. 70, 1788—habitat unknown (type in Museum Carlson).

*Icteria dumicola* Vieillot, Hist. Nat. Ois. Amér. Sept., 1, p. 85, pl. 55, 1807—Pennsylvania and New York (type in coll. of P. L. Vieillot).

*Pipra polyglotta* Wilson, Amer. Orn., 1, p. 90, pl. 6, fig. 2, 1808—Pennsylvania (type in Peale's Museum, probably lost).

*Icteria velasquezi* Bonaparte, Proc. Zool. Soc. Lond., 5, "1837," p. 117, June, 1838—Guatemala (type in coll. of Col. Velasquez).

*Icteria viridis* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 157, 1881—part (excl. syn. *longicauda*); Sharpe, Cat. Bds. Brit. Mus., 10, p. 373, 1885 (monog.).

*Icteria virens virens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 692, 1902 (monog., full bibliog.); Bangs, Bull. Mus. Comp. Zool., 39, p. 152, 1903—Honduras (Ceiba, Yaruca); Cole, Bull. Mus. Comp. Zool., 50, p. 138, 1906—Chichen Itza, Yucatan; Bangs, Auk, 24, p. 306, 1907—El Pózo del Rio Grande, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 803, 1910—Guácimo, Costa Rica; Phillips, Auk, 28, p. 86, 1911—Tamaulipas (Matamoros, Rampahuila, Caballeros, Altamira); Peters, Auk, 30, p. 378, 1913—Xcopen, Quintana Roo; Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 484, 1927—Vera Cruz (Presidio and Motzorongo); idem, l.c., 68, p. 401, 1928—Tapanatepec, Oaxaca; Austin, l.c., 69, p. 389, 1929—Mountain Cow, British Honduras; Peters, l.c., 69, p. 464, 1929—west of Tela, Honduras; Griscom, Bull. Amer. Mus. N. H., 64, p. 338, 1932—Guatemala (Chinoxan, La Primavera, Secanquim, Chanquejelve, Panajachel, Ocos, Hacienda California).

*Icteria virens* Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 130, 1907—Guatemala (Los Amates, Lake Amatitlan, San José, Mazatenango, Patulul, Lake Atitlan).

*Range*.—Eastern North America from southern Minnesota, Wisconsin, Michigan, Ontario, and central New York south to Texas and southern Florida; winters in Mexico and Central America south to Guatemala, rarely to Honduras and Costa Rica; casual in southern Saskatchewan, New Hampshire, and Maine.

27: Wisconsin (Beaver Dam, 3); Illinois (Grand Chain, 2; Mound City, 1); New Jersey (Englewood, 1); South Carolina (Mount Pleasant, 1); Mississippi (Holly Springs, 4; Vicksburg, 4); Texas (Brownsville, 1; Seadrift, 1); Guatemala (Lake Amatitlan, 1; Lake Atitlan, 1; Los Amates, Izabel, 2; Mazatenango, 1; Patulul, 2; San José, Escuintla, 2).

**\**Icteria virens auricollis* Bonaparte. LONG-TAILED CHAT.**

*Icteria auricollis* (Lichtenstein MS.<sup>1</sup>) Bonaparte, Consp. Gen. Av., 1, (2), p. 331, end of 1850—Mexico=Mexico City (type in the Berlin Museum).

*Icteria longicauda* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 6, p. 4, 1853—California=Stockton, San Joaquin County (type now in the American Museum of Natural History, New York; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 300, 1928); Sharpe, Cat. Bds. Brit. Mus., 10, p. 375, 1885 (monog.).

*Icteria longicaudata* Finsch, Abhandl. Naturw. Ver. Bremen, 2, p. 331, 1870—Mazatlan (crit.).

*Icteria virens longicauda* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 695, 1902 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 21, p. 366, 1905—Sinaloa (Escuinapa, Los Píeles); idem, l.c., 22, p. 179, 1906—Durango (Rio Sestín, Rancho Baillon); McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 44, 1927—San Blas, Nayarit; Grinnell, Univ. Calif. Pub. Zool., 32, p. 205, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 285, 1931—Sonora (Tecoripa, Saric, ten miles north of Guaymas, Guaymas, Agiabampo).

*Range*.—Western North America from southern British Columbia, northern Montana, and North Dakota south to Lower California, Jalisco, Guanajuato, and Mexico; winters on the tableland and west coast of Mexico from Chihuahua to Oaxaca.

32: Oregon (Ashland, 1); California (Burbank, 1; Corona, 2; Lakeside, 1; Los Gatos, 1; Sacramento, 1); Colorado (El Paso County,

<sup>1</sup> *Tanagra auricollis* Lichtenstein (Preis-Verz. Säug., Vögel, etc., Mexico, p. 2, 1830) is probably the same bird, though the description (in translation), "throat and breast golden yellow," is hardly sufficient to fix the name. Cf., however, Cabanis, Journ. Orn., 8, p. 403, 1860; and van Rossem, Trans. San Diego Soc. N. H., 7, p. 353, 1934.



1); Arizona (Calabasas, 15); Texas (Fort Clark, 1; Fort Worth, 2; Gainesville, 1; Ingram, Kerr County, 1); Mexico (Lower California, Comondú, 1; Iguala, Guerrero, 1; Mexico City, 2).

### Genus GRANATELLUS Bonaparte

*Granatellus* (Du Bus MS.) Bonaparte, Consp. Gen. Av., 1, (2), p. 312, end of 1850—type, by monotypy, *Granatellus venustus* Bonaparte.

#### **Granatellus venustus venustus Bonaparte. DU BUS'S RED-BREASTED CHAT.**

*Granatellus venustus* (Du Bus MS.)<sup>1</sup> Bonaparte, Consp. Gen. Av., 1, (2), p. 312, end of 1850—Mexico (type in Brussels Museum); Sclater, Proc. Zool. Soc. Lond., 1864, p. 607, pl. 37, lower fig.; Baird, Rev. Amer. Bds., 1, p. 231, 1865—western Mexico; Lawrence, Mem. Bost. Soc. N. H., 2, p. 270, 1874—Colima; idem, Bull. U. S. Nat. Mus., 4, p. 16, 1876—Tehuantepec (Santa Efigenia); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 160, 1881—Sierra Madre, Colima, and Santa Efigenia, Tehuantepec; Sharpe, Cat. Bds. Brit. Mus., 10, p. 369, 1885—western Mexico; Loomis, Auk, 18, p. 110, 1901—Tatemales and Rosario, Sinaloa (desc. female); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 699, 1902—western Mexico (monog.); Miller, Bull. Amer. Mus. N. H., 21, p. 366, 1905—Escuinapa, Sinaloa.

*Range*.—Western Mexico, in states of Sinaloa (Rosario, Tatemales, Escuinapa), Colima (Sierra Madre), Guerrero (Acapulco), and Oaxaca (Santa Efigenia).

#### **Granatellus venustus francescae Baird.<sup>2</sup> TRES MARIAS RED-BREASTED CHAT.**

*Granatellus francescae* Baird, Rev. Amer. Bds., 1, p. 231, 1865—Tres Marias Islands, off western Mexico (type in U. S. National Museum); Grayson, Proc. Bost. Soc. N. H., 14, p. 278, 1871—Tres Marias (habits); Lawrence, Mem. Bost. Soc. N. H., 2, p. 270, 1874—Tres Marias; Salvin, Ibis, 1874, p. 307, pl. 11—Tres Marias (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 161, 1881—Tres Marias (habits); Sharpe, Cat. Bds. Brit. Mus., 10, p. 370, 1885—Tres Marias; Nelson, N. Amer. Faun., 14, p. 56, 1899—Maria Madre Island (habits); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 700, 1902—Tres Marias (monog.); McLellan, Proc. Calif. Acad. Sci., (4), 15, p. 313, 1926—Maria Madre; idem, l.c., (4), 16, p. 44, 1927—Maria Madre.

<sup>1</sup> Plate 34 [lege 24] of Du Bus's "Esquisses Ornithologiques" quoted by Bonaparte was evidently never published. Cf. Sclater, Proc. Zool. Soc. Lond., 1859, p. 375, and l.c., 1864, p. 607.

<sup>2</sup> A strongly marked race by reason of its longer tail with more white on the lateral rectrices, absence of the black pectoral collar in the male sex, and other characters.

Three specimens from Maria Madre examined.

*Range*.—Maria Madre Island, Tres Marias group, off western Mexico.

**\**Granatellus sallaei sallaei* (Bonaparte).<sup>1</sup> SALLÉ'S RED-BREASTED CHAT.**

*Setophaga sallaei* ("Bonaparte and Selater") Bonaparte, Compt. Rend. Acad. Sci. Paris, 42, p. 957, May, 1856—southern Mexico=Cordoba, Vera Cruz (type in British Museum).

*Granatellus sallaei* Selater, Proc. Zool. Soc. Lond., 24, "1856," p. 292, pl. 120, Jan., 1857—Cordoba (a single spec.); idem, l.c., 26, p. 97, 1858 (type stated to be in the British Museum); idem, l.c., 27, p. 374, 1859—Playa Vicente, Oaxaca (descr. female); idem, l.c., 1864, p. 607—southern Mexico; Selater and Salvin, Ibis, 1860, p. 397—Cahabón, Guatemala; Baird, Rev. Amer. Bds., 1, p. 232, 1865—southern Mexico to Guatemala (crit.); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—Potrero, near Cordoba; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 40, 1878—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 161, 1881—part, Mexico (Cordoba, Potrero, Playa Vicente) and Guatemala (Cahabón, near Tactic); Sharpe, Cat. Bds. Brit. Mus., 10, p. 371, 1885—part, Mexico (excl. Yucatan) and Guatemala.

*Granatellus sallaei sallaei* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 701, 1902—southeastern Mexico (in states of Vera Cruz and Oaxaca) and Guatemala; Griscom, Bull. Amer. Mus. N. H., 64, p. 338, 1932—Vera Paz (Guatemala).

*Range*.—Southeastern Mexico, in states of Vera Cruz (Cordoba, Potrero, Buena Vista) and Oaxaca (Playa Vicente), and eastern Guatemala (Cahabón and near Tactic).

1: Guatemala (Vera Paz, 1).

***Granatellus sallaei boucardi* Ridgway. BOUCARD'S RED-BREASTED CHAT.**

*Granatellus sallaei boucardi* Ridgway, Proc. U. S. Nat. Mus., 8, p. 23, 1885—Yucatan (type in U. S. National Museum); Chapman, Bull. Amer. Mus. N. H., 8, p. 278, 1896—Chichen Itza, Yucatan; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 703, 1902—Yucatan (monog.); Cole, Bull. Mus. Comp. Zool., 50, p. 138, 1906—Chichen Itza, Yucatan; Griscom, Amer. Mus. Nov., 235, p. 16, 1926—Acomal, Yucatan.

*Granatellus sallaei* (not *Setophaga sallaei* Bonaparte) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 161, 1881—part, Yucatan; Boucard, Proc. Zool. Soc. Lond., 1883, p. 441—Yucatan; Sharpe, Cat. Bds. Brit. Mus., 10, p. 371, 1885—part, Yucatan.

*Range*.—Northern Yucatan (Chichen Itza, Acomal).

<sup>1</sup> The different proportions induce me to separate this bird specifically, inasmuch as the limits of its range in Oaxaca, whence *G. v. venustus* has also been recorded, have yet to be determined.

**\*Granatellus pelzelni pelzelni** Sclater. **PELZELN'S RED-BREASTED CHAT.**

*Granatellus pelzelni* Sclater, Proc. Zool. Soc. Lond., 1864, p. 606, pl. 27, upper fig.—Destacamento do Ribeirão, Rio Madeira, Brazil (type in coll. of P. L. Sclater, now in British Museum); Baird, Rev. Amer. Bds., 1, p. 231, 1865 (crit.); Pelzel, Orn. Bras., 3, p. 216, 1870—Destacamento do Ribeirão and Salto do Girão, Rio Madeira (spec. examined); Salvin, Ibis, 1885, p. 204—Camacusa, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, p. 370, 1885—Rio Madeira, Brazil, and Camacusa, British Guiana; Allen, Bull. Amer. Mus. N. H., 2, p. 79, 1889—Falls of the Rio Madeira, Bolivia; Berlepsch and Hartert, Nov. Zool., 9, p. 10, 1902—Orinoco (Munduapo) and Caura River (Suapure, La Pricion, Nicare, La Union), Venezuela; Ihering, Cat. Faun. Braz., 1, p. 332, 1907 (range); Snethlage, Journ. Orn., 56, pp. 497, 521, 1908—Rio Tapajóz (Villa Braga, Itaituba) and Rio Tocantins (Arumatheua); Penard, Vog. Guyana, 2, p. 486, 1910—Dutch Guiana; Snethlage, Bol. Mus. Goeldi, 8, p. 482, 1914—Rio Tocantins (Baião, Arumatheua), Rio Tapajóz (Boim, Pinhel, Itaituba, Villa Braga), and Rio Jary (Santo Antonio da Cachoeira); Chubb, Bds. Brit. Guiana, 2, p. 410, 1921—Ituribisci River, Supenaam, Mazaruni River, and Camacusa.

*Granatellus pelzelni pelzelni* Hellmayr, Nov. Zool., 14, pp. 5, 346, 1907—Rio Tapajóz (Itaituba) and Rio Madeira (Borba); idem, l.c., 17, pp. 265, 266, 1910—Calama, Rio Madeira, and Jamarysinho, Rio Machados (range); Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 152, 1916—Venezuela, Orinoco (Munduapo and La Cascabel) and Caura Valley; Naumburg, Bull. Amer. Mus. N. H., 60, p. 339, 1932—Matto Grosso (Rio Madeira, Destacamento do Ribeirão, Salto do Girão), Amazonas, Guiana, Venezuela.

*Range*.—Dutch and British Guiana; Amazon Valley from the Tocantins and Jary rivers to the Rio Branco and the Rio Madeira and south to northern Bolivia (Falls of the Rio Madeira, Dept. Beni); southern Venezuela (Orinoco-Caura basin).<sup>1</sup>

1: Brazil (Conceição, Rio Branco, 1).

**Granatellus pelzelni paraensis** Rothschild.<sup>2</sup> **PARÁ RED-BREASTED CHAT.**

<sup>1</sup> *Additional material examined*.—British Guiana: Camacusa, 1.—Venezuela: Suapure, Caura, 1; La Pricion, Caura, 7; Nicare, Caura, 4; La Union, Caura, 1; Munduapo, Orinoco, 1.—Brazil: Itaituba, Rio Tapajóz, 4; Borba, Rio Madeira, 2; Calama, Rio Madeira, 3; Ribeirão, Rio Madeira, 3; Salto do Girão, Rio Madeira, 1; Jamarysinho, Rio Machados, 1.

<sup>2</sup> *Granatellus pelzelni paraensis* Rothschild: Similar to *G. p. pelzelni*, but adult male with black (on upper part of the head) restricted to a well-defined frontal band (as far back as the anterior angle of the eye) and a narrow supraocular streak; only a small white spot at the posterior margin of the eye; and without the silky white stripe separating the gray flanks from the rosy pink middle of the belly, the whole sides of the abdomen being dark gray; female distinguishable by having the sides of the breast strongly washed with gray. Wing,  $52\frac{1}{2}$ , (female) 54; tail,  $50\frac{1}{2}$ , (female) 53; bill, 10–11.

*Material examined*.—Pará: Santo Antonio do Prata, 2.

*Granatellus pelzelni paraensis* Rothschild, Bull. Brit. Orn. Cl., 16, p. 81, May, 1906—[Santo Antonio do] Prata, Pará (type in Tring Museum, now in the American Museum of Natural History, New York); Hellmayr, Nov. Zool., 13, p. 355, 1906—Santo Antonio do Prata (crit.); Ihering, Cat. Faun. Braz., 1, p. 332, 1907—Pará; Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 86, 1912—Santo Antonio; Snethlage, Bol. Mus. Goeldi, 8, p. 482, 1914—Rio Guamá (Santa Maria do São Miguel).

**Range.**—Northern Brazil, in eastern part of the State of Pará (Santo Antonio do Prata; Santa Maria do São Miguel, Rio Guamá).

### Genus WILSONIA Bonaparte<sup>1</sup>

*Wilsonia* Bonaparte, Geog. and Comp. List Bds. Eur. N. Amer., p. 23, 1838—type, by subs. desig. (Ridgway, 1881), *Motacilla mitrata* Gmelin=*Muscicapa citrina* Boddaert.

*Myiodioides* Audubon, Syn. Bds. N. Amer., p. 48, 1839—type, by subs. desig. (Gray, List Gen. Bds., 2nd ed., p. 32, 1841), *Motacilla mitrata* Gmelin=*Muscicapa citrina* Boddaert.

*Myioctonus* Cabanis, Mus. Hein., 1, p. 18, 1851—new name for *Wilsonia* Bonaparte and *Myiodioides* Audubon.

### \**Wilsonia citrina* (Boddaert). HOODED WARBLER.

*Muscicapa citrina* Boddaert, Tabl. Pl. Enl., p. 41, 1783—based upon "Gobemouche, de la Louisiane" Daubenton, Pl. Enl., pl. 666, fig. 2; Louisiana.

*Motacilla mitrata* Gmelin, Syst. Nat., 1, (2), p. 977, 1789—based on "Mésange à collier de la Caroline" Brisson (Orn., 3, p. 578 [ex Catesby]), "Gobemouche citrin de la Louisiane" Buffon (Hist. Nat. Ois., 4, p. 538), and Daubenton, Pl. Enl., pl. 666, fig. 2.

*Muscicapa cucullata* Wilson, Amer. Orn., 3, p. 101, pl. 26, fig. 3, 1811—rare in Pennsylvania, but abundant through the whole extent of country south of Maryland, from the Atlantic to the Mississippi (type in Peale's Museum, doubtless lost).

*Muscicapa pileata* Stephens, in Shaw, Gen. Zool., 10, (2), p. 399, 1817—new name for *Muscicapa cucullata* Wilson.

*Muscicapa selbii* Audubon, Orn. Biog., 1, p. 46, 1831—near St. Francisville, Louisiana (=female without black on head).

*Myiodioides mitratus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 437, 1885 (monog.).

<sup>1</sup> *Wilsonia microcephala* (Ridgway). SMALL-HEADED WARBLER.

*Sylvania microcephala* Ridgway, Proc. U. S. Nat. Mus., 8, p. 354, 1885—new name for *Muscicapa minuta* Wilson (not of Gmelin, 1789), Amer. Orn., 6, p. 62, pl. 50, fig. 5, 1812; New Jersey, etc. (no type extant).

*Wilsonia microcephala* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 709, 1902.

Known only from the works of Wilson and Audubon, whose specimens came from New Jersey and Kentucky, respectively. Wilson's description and figure have never been satisfactorily identified with any known species.

*Wilsonia mitrata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 705, 1902 (monog., full bibliog.); Riley, in Shattuck, The Bahama Islands, p. 367, 1905—Cay Lobos, Bahamas.

*Wilsonia citrina* Carriker, Ann. Carnegie Mus., 6, p. 807, 1910—Costa Rica (El Hogar and Guácimo).

*Range*.—United States from southeastern Nebraska, northern Iowa, southern Michigan, central New York, and the lower Connecticut Valley south to the Gulf coast of Louisiana, Alabama, and Georgia, and in northern Florida; winters from Vera Cruz and Yucatan to Panama; occasional in the Bahamas, Cuba, and Jamaica, and casually north to Wisconsin, Ontario, and Massachusetts.

31: Illinois (Mound City, 1); Arkansas (Cleburne County, 1; Winslow, 2); New Jersey (Englewood, 2); Virginia (unspecified, 1); North Carolina (Raleigh, 6); South Carolina (Mount Pleasant, 1); Georgia (Chatham County, 1); Florida (East Pass, 1; Gainesville, 1; Key West, 2; Manatee County, 1; Starke, 1); Texas (Corpus Christi, 3); Yucatan (Cozumel Island, 2); British Honduras (Belize, 1; Orange Walk, 1); Guatemala (Los Amates, Izabel, 1; Patulul, Solola, 2).

**\**Wilsonia pusilla pusilla* (Wilson). WILSON'S WARBLER.**

*Muscicapa pusilla* Wilson, Amer. Orn., 3, p. 193, pl. 26, fig. 4, 1811—in the southern states, several times seen in the lower parts of New Jersey and Delaware (type in Peale's Museum, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 361, 1930).

*Sylvia wilsonii* Bonaparte, Journ. Acad. Nat. Sci. Phila., 4, p. 179, 1824—new name for *Muscicapa pusilla* Wilson.

*Sylvia petasodes* Lichtenstein, Preis-Verz. Säug., Vogel, etc., Mexico, p. 2, 1830—Mexico (type in the Berlin Museum examined; cf. also van Rossem, Trans. San Diego Soc. N. H., 7, p. 354, 1934).

(?) *Abrornis atricapilla* (Temminck MS.) Blyth, Ibis, (n.s.), 6, p. 169, 1870—"China" (type in the Leiden Museum; cf. Finsch, Proc. Zool. Soc. Lond., 1875, p. 640).<sup>1</sup>

*Myiodiodes pusillus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 435, 1885—part, subsp. *a*, *M. pusillus*, eastern North America south to Guatemala and Costa Rica.

*Wilsonia pusilla pusilla* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 710, 1902 (monog., full bibliog.); Bangs, Proc. Biol. Soc. Wash., 22, p. 36, 1909—Costa Rica (Tenório and Cerro de Santa Maria); Griscom, Bull. Amer. Mus. N. H., 64, p. 339, 1932—Guatemala (Chichicastenango, Chanquevelje, La Montañita, San Lucas).

<sup>1</sup> The type in the Leiden Museum should be reexamined to make certain whether the name refers to the typical race or to *W. p. pileolata*.

*Range*.—North America from Mackenzie, northern Manitoba, Quebec, and Newfoundland south to southern Saskatchewan, northern Minnesota, central Ontario, New Hampshire, Maine, and Nova Scotia; winters in eastern Central America from Guatemala to Costa Rica and occasionally in Mexico (Michoacan); casual in British Columbia, Washington, and Colorado.

56: Maine (New Vineyard, 1); Massachusetts (Cambridge, 1; Linfield, 1); Connecticut (East Hartford, 14); New York (Peterboro, 1); New Jersey (Englewood, 4); Pennsylvania (western, unspecified, 1); Illinois (Beach, Lake County, 1; Chicago, 4; Deerfield, 2; Hamilton, 1; Henry, 1; Lake Forest, 2; Warsaw, 1); Wisconsin (Beaver Dam, 5); Colorado (Mount Vernon Cañon, 1; unspecified, 1); Mexico (Aldama, Tamaulipas, 1; Tampico, 2; Teapa, 1); Guatemala (Los Amates, Izabel, 1; near Tecpam, 2); Nicaragua (Matagalpa, 1); Costa Rica (Guayábo, 5; Volcan Turrialba, 1).

**\**Wilsonia pusilla pileolata* (Pallas). NORTHERN PILEOLATED WARBLER.**

*Motacilla pileolata* Pallas, Zoogr. Rosso-Asiat., 1, p. 497, "1811" [=1826?].—Kodiak Island, Alaska (location of type not stated).

*Myiodioctes pusillus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 435, 1885—part, subsp.  $\beta$ , *M. pileolatus*, western United States south to Costa Rica and Panama (Volcan de Chiriquí).

*Wilsonia pusilla pileolata* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 712, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 802, 1910—Costa Rica (common winter visitant); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 276, 1910—Costa Rica (Coliblanco, Turrialba); Phillips, Auk, 28, p. 86, 1911—Tamaulipas; van Rossem, Trans. San Diego Soc. N. H., 6, p. 286, 1931—Sonora (Tecoripa, San Javier, Saric, Guirocoba); Griscom, Bull. Amer. Mus. N. H., 64, p. 340, 1932—Guatemala (abundant in winter).

*Range*.—Western North America from northern Alaska through eastern Oregon and eastern California to the mountains of New Mexico and central-western Texas, and on the Pacific coast to the Queen Charlotte Islands; winters from Mexico to western Panama; casual in Minnesota and Missouri.

73: Canada (Alberta, 1); Colorado (unspecified, 1); California (Carmel, 2; Oakland, 1; Monterey, 1; Palm Springs, 1; San Diego County, 1; Santa Clara, 1; Santa Cruz, 1); Arizona (Calabasas, 8; Chiricahua Mountains, 1; Fort Huachuca, 1; Fort Lowell, 2; Tucson, 1); New Mexico (Mimbres, 12); Texas (Davis Mountains, 1); Mexico (Altamira, 1; Coyotes, Durango, 1; Iguala, Guerrero, 1); Costa Rica (Coliblanco, 28; Volcan Turrialba, 6).

**\**Wilsonia pusilla chryseola* Ridgway. GOLDEN PILEOLATED WARBLER.**

*Wilsonia pusilla chryseola* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 714, 1902—"Pacific coast district of the United States and British Columbia" (type from Red Bluff, Tehama County, California, in U. S. National Museum; cf. Grinnell, Univ. Calif. Pub. Zool., 38, p. 301, 1932); Miller, Bull. Amer. Mus. N. H., 22, p. 179, 1906—Rio Sestín, Durango; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 44, 1927—Labrados, Sinaloa, and San Blas, Nayarit; Grinnell, Univ. Calif. Pub. Zool., 32, p. 206, 1928—Lower California; van Rossem, Trans. San Diego Soc. N. H., 6, p. 286, 1931—Sonora (Tecoripa, San Javier, Saric, Tésia, Chinobampo, Guirocoba); Griscom, Bull. Amer. Mus. N. H., 64, p. 340, 1932—Guatemala (Secanquim, Chichicastenango, Panajachel).

*Range*.—Pacific coast district of North America, from southern British Columbia to southern California; winters in Chihuahua, Sonora, Sinaloa, Durango, Nayarit, and the Cape district of Lower California, Mexico, and in Guatemala; casual on migration in eastern Oregon and Arizona.

10: Oregon (Tillamook, 2); California (Nicasio, 2; Eureka, 1; Los Angeles, 1; Fort Jones, 2; San Gabriel River, 1); Lower California (Burro Canyon, 1).

**\**Wilsonia canadensis* (Linnaeus). CANADA WARBLER.**

*Muscicapa canadensis* Linnaeus, Syst. Nat., 12th ed., 1, p. 327, 1766—based on "Le Gobe-mouche cendré de Canada" Brisson, Orn., 2, p. 406, pl. 39, fig. 4; Canada (type in coll. of M. de Réaumur, doubtless lost).

*Sylvia pardalina* Bonaparte, Journ. Acad. Nat. Sci. Phila., 4, p. 179, 1924—new name for *Muscicapa canadensis* Wilson, Amer. Orn., 3, p. 100, 1811.

*Muscicapa bonapartii* Audubon, Orn. Biog., 1, p. 27, 1831—near St. Francisville, Louisiana (descr. of young in autumn).

*Setophaga nigro-cincta* Lafresnaye, Rev. Zool., 6, p. 292, 1843—"Colombie" = Bogotá (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 361, 1930).

*Myiodioides canadensis* Taczanowski, Orn. Pér., 1, p. 468, 1884—Peruvian localities; Sharpe, Cat. Bds. Brit. Mus., 10, p. 432, 1885 (monog.); Winge, Medd. Grønland, 21, p. 282, 1898—Greenland.

*Wilsonia canadensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 716, 1902 (monog., full bibliog.); Carriker, Ann. Carnegie Mus., 6, p. 801, 1910—Costa Rica (San José, Miravalles, Carrillo, Río Sicsola); Chapman, Bull. Amer. Mus. N. H., 36, p. 548, 1917—Colombia (Alto Bonito, San Antonio, Río Frio, El Eden, San Agustín, Chicoral, Fusugasugá, Buena Vista); idem, l.c., 55, p. 596, 1925—eastern Ecuador (Zamora, Sabanilla, San José, Sumaco, Río Suno, Baeza, below Oyacachi); Naumburg, Auk, 43, p. 490, 1926—Peru (La Merced and Chaupe); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 425, 1930—Peru (Huachipa, Vista Alegre, Chin-

chao); Griscom, Bull. Amer. Mus. N. H., 64, p. 339, 1932—Guatemala (Chimoxan, Progreso, Zunil, Panajachel, Hacienda California).

*Sylvania canadensis* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 332—La Gloria and La Merced, Dept. Junín, Peru; idem, Ornith., 13, p. 76, 1906—Idma, Urubamba, Peru.

*Range*.—North America from Alberta, Manitoba, Ontario, Quebec, and Newfoundland south to central Minnesota and Michigan, central New York, and Connecticut, and along the Alleghenies to northern Georgia and Tennessee; winters in southern Central America (Guatemala to Panama), eastern Ecuador, and eastern Peru (south to the Urubamba Valley); casual in Colorado; accidental in Greenland (one record).

74: Maine (Lincoln, 1; New Vineyard, 1; Upton, 4); Massachusetts (Cambridge, 1); Connecticut (East Hartford, 23); New York (Albion, Cayuga County, 1; Milford, 1; Peterboro, 1; Shelter Island, 1); New Jersey (Englewood, 2); Pennsylvania (St. Mitchell, 1); North Carolina (Raleigh, 1); Wisconsin (Beaver Dam, 12; Woodruff, Vilas County, 1); Illinois (Chicago, 6; Deerfield, 2; Fox Lake, 2; Henry, 1; Joliet, 1; Lewistown, 1); Louisiana (Cameron Parish, 1); Mexico (unspecified, 2); Costa Rica (Buenos Aires, 1); Peru (Chinchao, 3; Huachipa, 2; Vista Alegre, 1).

### Genus CARDELLINA Bonaparte

*Cardellina* (Du Bus MS.)<sup>1</sup> Bonaparte, Consp. Gen. Av., 1, (2), p. 312, end of 1850—type, by subs. desig. (Baird, Rev. Amer. Bds., 1, p. 263, 1865), *Cardellina amicta* "Du Bus"=*Muscicapa rubrifrons* Giraud.

### \**Cardellina rubrifrons rubrifrons* (Giraud). RED-FACED WARBLER.

*Muscicapa rubrifrons* Giraud, Descr. Sixteen Spec. N. Amer. Birds, p. [15], pl. [7], fig. 1, 1841—"Texas," errore (type probably in the U. S. National Museum).

*Cardellina amicta* (Du Bus MS.)<sup>1</sup> Bonaparte, Consp. Gen. Av., 1, (2), p. 312, end of 1850—Mexico (type in Brussels Museum).

*Setophaga rubrifrons* Baird, in Stansbury's Rep. Great Salt Lake, p. 329, 1852—"Texas."

*Cardellina rubrifrons* Sclater, Proc. Zool. Soc. Lond., 23, p. 66 (in text), 1855; idem, l.c., 26, p. 299, 1858—La Parada, Oaxaca; idem, l.c., 27, p. 374,

<sup>1</sup> Though *Cardellina amicta* is credited to "Du Bus, Esq. Orn., livr. 5, pl. 25, 1849," livr. 5 of that scarce work apparently was never issued, the figure of *Granatellus venustus*, supposed to form pl. 24 in the same part, being referred to by Sclater (Proc. Zool. Soc. Lond., 27, p. 375, 1859; l.c., 1864, p. 607) as still unpublished at the time of his writing. All the copies of the "Esquisses Ornithologiques" that we have seen consist of only four livraisons, each with five plates and accompanying text.



1859—Cinco Señores, Oaxaca; idem, Cat. Coll. Amer. Bds., p. 37, 1862—southern Mexico; Baird, Rev. Amer. Bds., 1, p. 264, 1865—part, spec. a, Mexico; Henshaw, Zool. Exp. W. 100th Merid., p. 211, 1875—Mount Graham and mountains near Apache, Arizona (breeding habits); Brewster, Bull. Nutt. Orn. Cl., 6, p. 68, 1881—Fort Bayard, New Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 162, 1881—part, Arizona and Mexico (Jalapa, La Parada, Cinco Señores); Sharpe, Cat. Bds. Brit. Mus., 10, p. 408, 1885—part, spec. a-e, Arizona (Santa Rita Mountains) and Mexico (La Parada, valley of Mexico); Scott, Auk, 2, p. 353, 1885—Pima County, southern Arizona; idem, Auk, 5, p. 36, 1888—Santa Catalina Mountains, Arizona; Price, Auk, 5, p. 385, 1888—Huachuca Mountains, Arizona (nest and eggs descr.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 720, 1902—part, southern Arizona, New Mexico, and Mexico.

*Basileuterus rubrifrons* Sclater, Proc. Zool. Soc. Lond., 27, p. 363, 1859—Jalapa, Vera Cruz.

**Range.**—Transition zone of southern Arizona, southwestern New Mexico, and south through the Mexican tableland to Vera Cruz and Oaxaca.

23: Arizona (Catalina Mountains, 1; Huachuca Mountains, 15); Mexico (Chihuahua, 3; Coyotes, Durango, 4).

**\**Cardellina rubrifrons bella* Griscom.<sup>1</sup> GUATEMALAN RED-FACED WARBLER.**

*Cardellina rubrifrons bella* Griscom, Amer. Mus. Nov., 438, p. 2, 1930—Chichicastenango, Guatemala (type in Dwight Collection, in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 64, p. 340, 1932—Chichicastenango.

*Cardellina rubrifrons* (not *Muscicapa rubrifrons* Giraud) Baird, Rev. Amer. Bds., 1, p. 264, 1865—part, spec. b, Totonicapam, Guatemala; Salvin, Ibis, 1866, p. 192—Volcan de Fuego and Totonicapam, Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 162, 1881—part, Guatemala (Volcan de Fuego, Totonicapam); Sharpe, Cat. Bds. Brit. Mus., 10, p. 408, 1885—part, spec. f-n, Volcan de Fuego and Calderas, Guatemala; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 720, 1902—part, Guatemala.

**Range.**—Temperate pine forests of western Guatemala.

1: Guatemala (Volcan de Fuego, 1).

**Genus SETOPHAGA Swainson<sup>2</sup>**

<sup>1</sup> *Cardellina rubrifrons bella* Griscom: Similar to *C. r. rubrifrons*, but darker throughout; red areas more intense, approaching crimson, and gray of upper parts slightly more slaty; under parts grayer with less white in the middle of breast and abdomen.

<sup>2</sup> Additional material examined.—Guatemala: Volcan de Fuego, 2.

<sup>3</sup> *Setophaga multicolor* Bonaparte (Consp. Gen. Av., 1, p. 312, 1850), from "Mexico," is probably an Australian species (cf. Salvin, Ibis, 1878, p. 321). The

*Setophaga* Swainson, Phil. Mag., (n.s.), 1, No. 5, p. 368, May, 1827—type, by subs. desig. (Swainson, Zool. Journ., 3, p. 360, Dec., 1827, or later), *Motacilla ruticilla* Linnaeus.

*Cetophaga* Lesson, Man. d'Orn., 2, p. 430, 1828—emendation.

*Sylvania* Nuttall, Man. Orn. U. S. and Can., 1, p. 290, 1832—new name for *Setophaga* Swainson.

*Erythrosoma* Swainson, in Swainson and Richardson, Faun. Bor.-Amer., 2, "1831," p. 201, Feb., 1832—type, by subs. desig. (Richmond, Proc. U. S. Nat. Mus., 53, p. 589, 1917), *Setophaga picta* Swainson.

**\**Setophaga ruticilla* (Linnaeus). AMERICAN REDSTART.**

*Motacilla ruticilla* Linnaeus, Syst. Nat., 10th ed., 1, p. 186, 1758—based on "The Redstart" Catesby (Nat. Hist. Carolina, 1, p. 67, pl. 67), "Serino affinis avicula..." Sloane (Hist. Jamaica, 2, p. 312), and "The Small American Redstart" Edwards (Nat. Hist. Birds, 2, p. 80, pl. 80); Virginia (ex Catesby) accepted as type locality.

*Motacilla tricolora* P. L. S. Müller, Natursyst., Suppl., p. 175, 1776—based on "Figuier noir et jaune de Cayenne" Daubenton, Pl. Enl., pl. 391, fig. 2.

*Motacilla multicolor* Gmelin, Syst. Nat., 1, (2), p. 972, 1789—based on "Figuier noir" Buffon and "Figuier noir et jaune de Cayenne" Daubenton, Pl. Enl., pl. 391, fig. 2 (=adult male).

*Motacilla flavicauda* Gmelin, Syst. Nat., 1, (2), p. 997, 1789—based on "The Yellow-tailed Fly-catcher" Edwards, Glean. Nat. Hist., 1, p. 101, pl. 257, upper fig.; "on the coast of Hispaniola, about ten leagues from land" (=adult female).

*Septophaga* [sic] (*ruticilla*) *tropica* Verrill,<sup>1</sup> Addition to the Avifauna of Dominica, p. —[unpaged, undated pamphlet], Oct., 1905—Dominica (type in coll. of A. H. Verrill?).

*Setophaga ruticilla* Sharpe, Cat. Bds. Brit. Mus., 10, p. 411, 1885 (monog.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 724, 1902 (monog., full bibliog.).

**Range.**—North America from northern British Columbia, Mackenzie, Manitoba, Quebec, and Newfoundland to Oregon, Utah, Colorado, Oklahoma, Arkansas, Alabama, northern Georgia, and North Carolina; winters in the West Indies and from southern Mexico and southern Lower California south to Trinidad, the Guianas, Venezuela, Colombia, and Ecuador.

type, credited to the Frankfort Museum by the describer, appears to be lost; at least it is not listed by Hartert in the "Kat. Vogels. Mus. Senckenb. Naturf. Gesellschaft."

<sup>1</sup> This supposed resident form is said to be distinguished from the American Redstart by brighter colors and smaller size, as well as by different notes and eggs. I have not been able to verify the characters in coloration or size, and the statement of its breeding on the island of Dominica is so extraordinary that it cannot be accepted without further evidence. The numerous specimens from the West Indies and South America examined in the present connection are absolutely identical with North American birds, and were doubtless migrants from the North.

245: Maine (New Vineyard, 1; Upton, 4); Massachusetts (Cliftondale, 1; Malden, 1); Connecticut (East Hartford, 25); Rhode Island (East Providence, 2); New York (Rochester, 1; Shelter Island, 2); Indiana (Bluffton, 2); Illinois (Auburn Park, 1; Chicago, 7; Deerfield, 3; Fox Lake, 3; Hegewisch, 2; Henry, 2; Joliet, 12; Lake Forest, 11; Lake George, 1; Libertyville, 1; Lyons, Cook County, 2; Olive Branch, 1; Ravinia, 2; Roby, 2; Warsaw, 1); Wisconsin (Beaver Dam, 8; Milton, 1); Iowa (Cedar Rapids, 3); Colorado (Fort Lyon, 5); Arkansas (Winslow, 1); North Carolina (Raleigh, 2); Florida (Nassau County, 1; New River, 1; West Jupiter, 6); Mexico (Teapa, Tabasco, 3; Yucatan, Cozumel Island, 1); British Honduras (Ruatan, 1); Guatemala (Gualan, Zacapa, 1); Nicaragua (Matagalpa, 1; San Gerónimo, 1); Costa Rica (Guayábo, 4; Limón, 1); West Indies (Great Bahama, 1; Bimini, 3; Berry, 1; Nassau, New Providence, 2; Inagua, 9; Grand Cayman, 4; Cayman Brac, 1; Jamaica, 3; Haiti, 6; Santo Domingo, 22; Porto Rico, 3; Tortola, 1; Virgin Gorda, 2; St. Croix, 5; Anguilla, 4; St. Eustatius, 7; St. Kitts, 14; Guadeloupe, 2; Marie Galante, 2; Martinique, 9; Barbados, 1; Santa Lucia, 2); Colombia ("Bogotá," 2); Venezuela (Caracas, 3; Maracay, Aragua, 1; Lake Valencia, 1; Montaña Sierra, Mérida, 1; Conejos, Mérida, 1; Colón, Tachira, 1).

**\**Setophaga picta picta* Swainson. PAINTED REDSTART.**

*Setophaga picta* Swainson, Zool. Illust., (2), 1, No. 1, pl. 3, 1829—Real del Monte, Hidalgo, Mexico (type in coll. of D. Taylor); Baird, Rev. Amer. Bds., 1, p. 256, 1865—part, Boquillo, Nuevo Leon, and Sierra Madre, near Mazatlan, Sinaloa; Salvin, Ibis, 1878, p. 306—part, southern Arizona and Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 179, 1881—part, Arizona and Mexico (excl. Gineeta Mountains); Sharpe, Cat. Bds. Brit. Mus., 10, p. 415, 1885—Arizona (Santa Rita Mountains) and Mexico (monog.).

*Muscicapa leucomus* Giraud, Descr. Sixteen Spec. N. Amer. Birds, pl. [6], fig. 1, 1841—"Texas" (type now in U. S. National Museum).

*Setophaga picta picta* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 728, 1902 (monog., full bibliog.); Miller, Bull. Amer. Mus. N. H., 22, p. 179, 1906—northwestern Durango (Las Bocas, Matalotes, La Cienaga de las Vacas, Rio Sestin, and Arroyo del Buey); Phillips, Auk, 28, p. 86, 1911—Tamaulipas (Rampahuila, Potrero, Rio Martinez, Galindo, Realito).

**Range.**—Temperate zone of central and southern Arizona and southern New Mexico and southward over the Mexican tableland to Guerrero and Oaxaca.

25: Arizona (Chiricahua Mountains, 2; Huachuca Mountains, 15; Whetstone Mountains, 1); New Mexico (Fort Bayard, 1); Mexico

(Sonora, 1; Chihuahua, 1; thirty miles west of Miñaca, 1; Durango, 1; Tamaulipas, 1; unspecified, 1).

**\*Setophaga picta guatemalae Sharpe. GUATEMALAN PAINTED REDSTART.**

*Setophaga picta* subsp. *a* *Setophaga guatemalae* Sharpe, Cat. Bds. Brit. Mus., 10, p. 417, 1885—Guatemala, no type locality indicated (type in British Museum).

*Setophaga picta guatemalae* Nelson, Auk, 15, p. 159, 1898—pine forests of the interior of Chiapas; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 729, 1902—Chiapas, Guatemala, and Honduras (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 130, 1907—near Tecpam, Guatemala; Griscom, Bull. Amer. Mus. N. H., 64, p. 340, 1932—Guatemala (Chichicastenango, Momostenango, Chanquejelve, Uspantan, Huehuetenango, Panajachel, La Montañita, Quezaltenango); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 335, 1932—San Juancito, Honduras.

*Setophaga picta* (not of Swainson) Selater and Salvin, Ibis, 1859, p. 12—Guatemala; Taylor, Ibis, 1860, p. 110—Comayagua, Honduras; Baird, Rev. Amer. Bds., 1, p. 256, 1865—part, Guatemala (Volcan de Fuego); Lawrence, Bull. U. S. Nat. Mus., 4, p. 16, 1876—Gineta Mountains, Chiapas, Mexico; Salvin, Ibis, 1878, p. 306—part, Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 179, 1881—part, Mexico (Gineta Mountains), Guatemala (Volcan de Fuego, ridge near Chol, San Gerónimo, Santa Barbara, Chilasco, Tactic), and Honduras (Comayagua).

*Range*.—Temperate zone of Guatemala, Honduras, and northern Nicaragua.

1: Guatemala (near Tecpam, 1).

**Genus MYIOBORUS Baird**

*Myioborus* Baird, Rev. Amer. Bds., 1, pp. 237, 257, May, 1865—type, by orig. desig., *Setophaga verticalis* Lafresnaye and d'Orbigny.

**\*Myioborus miniatus miniatus (Swainson). RED-BELLIED MYIOBORUS.**

*Setophaga miniata* Swainson, Phil. Mag., (n.s.), 1, No. 5, p. 368, May, 1827—woods of Valladolid, tableland of Mexico (type now in University Museum, Cambridge, Engl.; cf. Salvin, Ibis, 1878, p. 309); Baird, Rev. Amer. Bds., 1, p. 259, 1865—Mexico (crit.); Salvin, Ibis, 1878, p. 308—part, Mexico (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 181, 1881—part, Mexican localities and references; Sharpe, Cat. Bds. Brit. Mus., 10, p. 418, 1885—Mexico (near Mexico City, La Parada, Jalapa); Smith, Condor, 11, p. 62, 1909—Morelos.

*Muscicapa larvata* Lichtenstein, Preis-Verz. Säug., Vögel, etc., Mexico, p. 2, 1830—Mexico (type in Berlin Museum).

*Muscicapa vulnerata* Wagler, Isis, 1831, p. 529—Mexico (type in Munich Museum).

*Setophaga castanea* Lesson, Rev. Zool., 2, p. 42, 1839—Mexico (type in coll. of Dr. Abeillé, Bordeaux).

*Muscicapa derhamii* Giraud, Descr. Sixteen New N. Amer. Bds., p. [13], pl. 3, [fig. 2], 1841—"Texas," errore (type now in U. S. National Museum).

*Myioborus miniatus miniatus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 731, 1902—Mexico (monog., full bibliog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 286, 1931—Chinobampo, Sonora.

*Range*.—Subtropical zone of Mexico, from southern Sonora (Chinobampo), Sinaloa, and Chihuahua (Jesus Maria) south to Vera Cruz, Puebla, and Oaxaca.<sup>1</sup>

1: Mexico (unspecified, 1).

**\*Myioborus miniatus intermedius (Hartlaub).<sup>2</sup> HARTLAUB'S MYIOBORUS.**

*Setophaga intermedia* Hartlaub, Rev. Mag. Zool., (2), 4, p. 5, Jan., 1852—Guatemala (type in Bremen Museum examined).

*Setophaga flammea* Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 50, pub. Oct., 1852—Guatemala (type in Derby Collection, now in Liverpool Museum); Sclater and Salvin, Ibis, 1859, p. 12—Guatemala (part, as to Skinner's specimens from Vera Paz); Baird, Rev. Amer. Bds., 1, p. 259, 1865—Coban, Guatemala (crit.).

*Setophaga miniata* (not of Swainson) Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 40, 1878—Guatemala=Vera Paz (spec. examined); Salvin, Ibis, 1878, p. 308—part, eastern Guatemala (Coban, Choctum, Chilasco, Carrizal); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 181, 1881—part, eastern Guatemala (Carrizal, Chilasco, Coban).

*Setophaga miniata* subsp.  $\alpha$  *Setophaga flammea* Sharpe, Cat. Bds. Brit. Mus., 10, p. 419, 1885—part, spec. d-i, Guatemala (Coban, Choctum).

*Setophaga miniata flammea* Nelson, Auk, 15, p. 159, 1898—Chiapas.

<sup>1</sup> A series from Vera Cruz (Jalapa) examined.

<sup>2</sup> *Myioborus miniatus intermedius* (Hartlaub), though nearly allied to the typical race, differs nevertheless by shorter tail, less extensive white apical areas on the lateral rectrices, and less vermilion (grenadine red to scarlet) under parts. Wing, 60-65; tail, 58-64.

Through the courtesy of the authorities of the Bremen Museum I have been enabled to examine the type of *S. intermedia*. The specimen, an unsexed adult, which, by reason of the predominating slaty color on head and throat, I take to be a female, is so badly faded through exposure to light that the original coloration of the under parts cannot even be guessed. In proportions (wing, 61; tail, 63) it agrees, however, so perfectly with a series from Alta Vera Paz that I cannot but refer it to the Atlantic form, which thus becomes *M. m. intermedius*, Hartlaub's name having undoubted priority over Kaup's. The type of *S. flammea*, an unsexed bird, is labeled: "J. Bates, Guatemala. Sept. 1843." Mr. Kinnear, who, on my request, compared it with the material in the British Museum, reports that in color it cannot be separated from certain western Guatemalan examples, notably one from Dueñas. However, the measurements (wing, 60; tail, 63) place it decidedly with the Atlantic form, whereas color characters between the two Guatemalan races are not absolutely constant.

*Additional material examined*.—Guatemala: Finca Sepacuite, 7; La Montaña, 1; Barrillos, 2; La Perla, 2; Coban, 7; unspecified, 1 (the type of *S. intermedia*).

*Myioborus miniatus flammeus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 733, 1902—part, Chiapas (Tumbalá, Yajalon, Chicharroos, Tenejapa) and eastern Guatemala (Coban, Choctum); Griscom, Bull. Amer. Mus. N. H., 64, p. 341, 1932—Alta Vera Paz, Guatemala (crit.).

*Range*.—Subtropical zone of southeastern Mexico (State of Chiapas) and eastern (Atlantic) Guatemala.

2: Guatemala (Alta Vera Paz, 1; unspecified, 1).

**\**Myioborus miniatus connectens* Dickey and van Rossem.<sup>1</sup>**  
INTERMEDIATE MYIOBORUS.

*Myioborus miniatus connectens* Dickey and van Rossem, Proc. Biol. Soc. Wash., 41, p. 189, 1928—Los Esesmites, Dept. Chalatenango, El Salvador (type in coll. of Donald R. Dickey, Pasadena); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 335, 1932—San Juancito, Honduras.

*Setophaga flammea* (not of Kaup) Sclater and Salvin, Ibis, 1859, p. 12—Guatemala (part, as to Constanica's specimen); Sclater, Cat. Coll. Amer. Bds., p. 37, 1862—Guatemala (ex Constanica).

*Setophaga miniata* subsp. *a* *Setophaga flammea* Sharpe, Cat. Bds. Brit. Mus., 10, p. 419, 1885—part, spec. a-c, k-n, Guatemala (Volcan de Fuego, Dueñas, Volcan de Agua).

*Myioborus miniatus flammeus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 733, 1902—part, western Guatemala (Volcan de Fuego, Volcan de Agua, Dueñas); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 131, 1907—near Tecpam, Guatemala.

*Setophaga miniata* (not of Swainson) Salvin, Ibis, 1878, p. 308—part, western Guatemala (Quezaltenango, Volcan de Fuego); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 181, 1881—part, western Guatemala (Quezaltenango, Volcan de Fuego, Dueñas).

*Myioborus miniatus intermedius* (not *Setophaga intermedia* Hartlaub) Griscom, Bull. Amer. Mus. N. H., 64, p. 341, 1932—Volcan San Lucas, Chichi-

<sup>1</sup> *Myioborus miniatus connectens* Dickey and van Rossem: Similar to *M. m. intermedius*, but larger, the tail particularly longer, and under parts decidedly more orange, their color varying from orange chrome to flame scarlet. Wing, 66-70, (female) 63-65; tail, 67-72, (female) 65-68.

On comparison with a series from the Atlantic slope, the larger size and the longer tail of the inhabitants of the Pacific Cordillera are quite noticeable. Besides, the under parts in western birds are decidedly more orange, although single individuals, e.g. our Tecpam specimen, hardly differ on this score from certain exceptionally light-bellied east Guatemalan examples. With the material at hand I am not prepared to separate the west Guatemalan form from *M. m. connectens*, since two birds from the Volcan de Puca, Honduras, have the under parts of exactly the same orange chrome tone as various light-bellied individuals from San Lucas, Panajachel, etc. It is, of course, quite possible that true *connectens*, from El Salvador, may reach a paler "extreme" (bittersweet orange), but this can only be determined by the study of adequate series. *M. m. connectens* forms a highly interesting connecting link to the heretofore specifically separated *M. m. aurantiacus*.

*Additional material examined*.—Guatemala: San Lucas, 4; Panajachel, 2; Chichicastenango, 2; Antigua, 1; Volcan de Fuego, 5.—Honduras: Volcan de Puca, 2.

castenango, Antigua, Quezaltenango, Panajachel, and Tecpam, western Guatemala (crit.).

**Range.**—Subtropical zone of western (Pacific) Guatemala, El Salvador, and Honduras (Volcan de Puca; San Juancito).

1: Guatemala (Tecpam, 1).

**\*Myioborus miniatus aurantiacus (Baird). ORANGE-BELLIED MYIOBORUS.**

*Setophaga aurantiaca* Baird, Rev. Amer. Bds., 1, p. 261, May, 1865—Dota Mountains, San José, and Barránca, Costa Rica (type from Dota in U. S. National Museum); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 96, 1868—Grecia, Barránca, and Dota, Costa Rica; Frantz, Journ. Orn., 17, p. 294, 1869—Candelaria Mountains, Costa Rica; Salvin, Ibis, 1869, p. 313—Costa Rica (crit.); idem, Ibis, 1878, p. 310—part, Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 83—Cartago and Naránjo, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 182, 1881—part, Costa Rica; Sharpe, Cat. Bds. Brit. Mus., 10, p. 421, 1885—part, spec. a-f, San José, Turrialba, and Tucurriquí, Costa Rica; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Cartago and Dota; Cherrie, Proc. U. S. Nat. Mus., 14, p. 528, 1891—Costa Rica (crit.); idem, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 6, p. 13, 1894—Rio Naránjo.

*Myioborus aurantiacus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 733, 1902—part, Costa Rica; Bangs, Proc. New Engl. Zool. Cl., 4, p. 30, 1908—Costa Rica (crit.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 277, 1910—Guayábo and Coliblanco; Carriker, Ann. Carnegie Mus., 6, p. 799, 1910—Costa Rica (habits).

*Setophaga flammea* (not of Kaup) Cabanis, Journ. Orn., 9, p. 85, 1861—Costa Rica (crit.); Baird, Rev. Amer. Bds., 1, p. 259, 1865—part, Costa Rica (ex Cabanis).

**Range.**—Subtropical zone of Costa Rica.

25: Costa Rica (Cartago, 2; Coliblanco, 13; Guayábo, 4; Irazú district, 1; Juan Viñas, 1; Limón, 2; Santa Cruz de Turrialba, 2).

**Myioborus miniatus acceptus Bangs.<sup>1</sup> CHIRIQUÍ MYIOBORUS.**

*Myioborus aurantiacus acceptus* Bangs, Proc. New Engl. Zool. Cl., 4, p. 30, 1908—Boquete, Volcan de Chiriquí, Panama (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 361, 1930).

*Setophaga aurantiaca* (not of Baird) Salvin, Proc. Zool. Soc. Lond., 1870, p. 183—Calovévora, Veragua, and Volcan de Chiriquí, Panama; idem,

<sup>1</sup> *Myioborus miniatus acceptus* Bangs: Similar to *M. m. aurantiacus*, but under parts much paler and less orange, chrome yellow rather than cadmium.

By the coloration of the lower parts this form marks a decided step in the direction of *M. m. pallidiventris*, and certain unusually dark-colored South American birds are in fact barely separable on this score, though they differ by slaty rather than blackish front and sides of the head and throat.

**Material examined.**—Panama: Boquete, 4.

Ibis, 1878, p. 310—part, Calovévora and Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 182, 1881—part, Panama (Calovévora, Chiriquí); Sharpe, Cat. Bds. Brit. Mus., 10, p. 421, 1885—part, spec. g-i, Calovévora and Volcan de Chiriquí; Bangs, Proc. New Engl. Zool. Cl., 3, p. 61, 1902—Boquete, Panama.

*Myioborus aurantiacus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 733, 1902—part, Panama (Volcan de Chiriquí, Boquete, Calovévora).

*Range*.—Subtropical zone of western Panama, from Chiriquí east to Veragua (Calovévora).

**\**Myioborus miniatus pallidiventris* (Chapman).<sup>1</sup> PALE-BELLIED MYIOBORUS.**

*Selophaga verticalis pallidiventris* Chapman, Bull. Amer. Mus. N. H., 12, p. 153, 1899—Quebrada Secca, inland of Cumaná, northeastern Venezuela (type in the American Museum of Natural History, New York); Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 48, 1912—Cumbre de Valencia, Carabobo, Venezuela (crit.).

*Myioborus verticalis pallidiventris* Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 159, 1924—Galipán, Cerro del Avila, and Silla de Caracas, Venezuela (crit.); Chapman, Amer. Mus. Nov., 191, p. 10, 1925—Neverí, Latal, and La Trinidad, Sucre, Venezuela (crit.); idem, Bull. Amer. Mus. N. H., 55, p. 596, 1926—Mindo, Rios Coco and Chimbo, La Puente, El Chiral, Zaruma, Punta Santa Ana, Guachanamá, San Bartolo, Alamor, Cebollal, Celica, Loja, Zamora, Sabanilla, below San José, lower Sumaco, upper Sumaco, Baeza, and below Oyacachi, Ecuador (crit.); idem, l.c., 63, p. 114, 1931—Roraima (Arabupu) and Mount Duida (Agüita), Venezuela (crit.).

<sup>1</sup> *Myioborus miniatus pallidiventris* (Chapman): Very similar to *M. m. verticalis*, but under parts on average paler yellow, and white apical area to lateral rectrices less extensive.

On going again over a considerable amount of material I cannot but agree with Dr. Chapman that the lesser extent of white in the tail serves to distinguish this form, when compared with a series from southern Peru and Bolivia. The intensity of coloration underneath is subject to much individual variation. While nine skins from the mountains inland of Cumaná and twenty from the Caracas region undeniably are of a clearer as well as more uniform yellow than those from any other locality, similar individuals may likewise be encountered in other parts of the range, although the majority are more richly colored with a more or less pronounced ochraceous wash on the chest. The last-named feature is most strongly developed in specimens from western Colombia, some of them being quite as dark as *M. m. acceptus* from Chiriquí. Birds from Carabobo (Cumbre de Valencia) are exactly intermediate between those of northeastern Venezuela and those of Colombia, while Mérida specimens agree with the latter. Western Ecuadorean examples are again rather pale below and, furthermore, have less black on the forehead and sides of the crown.

*Additional material examined*.—Venezuela: mountains near Cumaná (Quebrada Secca, Los Palmales, etc.), 9; Galipán, Cerro del Avila, 19; Silla de Caracas, 1; Cumbre de Valencia, Carabobo, 9; Mérida region (Mérida, El Valle, Escorial), 12.—Colombia: Bogotá, 22; western Andes (San Antonio, Las Lomitas, etc.), 8.—Western Ecuador (Niebli, Pichincha, Ibarra, Chimbo): 12.—Eastern Ecuador: Papallacta, 8.



*Myioborus pallidiventris* Chubb, Bds. Brit. Guiana, 2, p. 414, 1921—Roraima.

*Selophaga verticalis* (not of Lafresnaye and d'Orbigny) Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 50, Oct., 1852—"Bogotá" (diag.); Sclater, l.c., 23, p. 144, 1855—"Bogotá"; idem, l.c., 27, p. 137, 1859—Pallatanga, Ecuador; idem, l.c., 28, p. 84, 1860—Perucho and Puellaro, Ecuador; idem, Cat. Coll. Amer. Bds., p. 37, 1862—"Bogotá" and Pallatanga; Baird, Rev. Amer. Bds., 1, p. 258, 1865—"Bogotá" and Ecuador; Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 166—Caripé and Caracas, Venezuela; Wyatt, Ibis, 1871, p. 323—Alto, Santa Rosa, and Canuto, eastern Andes of Colombia; Salvin, Ibis, 1878, p. 311—part, Ecuador, Colombia, and Venezuela; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Concordia and Santa Elena, Colombia (eggs descr.); Salviñ and Godman, Ibis, 1880, p. 118—San Sebastian, Colombia; Berlepsch, Journ. Orn., 32, p. 284, 1884—Bucaramanga, Colombia; Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—Chimbo, Ecuador; idem, l.c., 1884, p. 287—Cayanded, Ecuador; idem, l.c., 1885, p. 75—Mapoto and Machay, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 420, 1885—part, spec. d-t, Ecuador (Pallatanga, "Quito," Jima), Colombia ("Bogotá," Concordia, Santa Elena, San Sebastian, San Salvador), Venezuela (Caracas), and British Guiana (Roraima); Salvin, Ibis, 1885, p. 203—Roraima; Hartert, Nov. Zool., 5, p. 480, 1898—Ibarra, Ecuador; Bangs, Proc. Biol. Soc. Wash., 12, p. 180, 1898—San Miguel, Colombia; idem, Proc. New Engl. Zool. Cl., 1, p. 80, 1899—San Sebastian and El Mamon, Colombia; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Niebli, Ecuador; Allen, Bull. Amer. Mus. N. H., 13, p. 176, 1900—Las Nubes, Valparaiso, and El Libano, Colombia; Goodfellow, Ibis, 1901, p. 315—west side of Pichincha and Papallacta, Ecuador (crit.).

*Myioborus verticalis* Ménégau, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 71, 1911—Mindo and "Quito," Ecuador; Piguet, Mém. Soc. Neuchât. Sci. Nat., 5, p. 808, 1914—Cafetal La Camelia, near Angelópolis, Colombia; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—near Niebli, Tumbaco, below Nono, and Chinguil, Ecuador; Todd and Carriker, Ann. Carnegie Mus., 14, p. 444, 1922—Macotama, La Concepción, Chirua, Las Nubes, Valparaiso, Cincinnati, Las Taguas, Sierra Nevada de Santa Marta, Las Vegas, Pueblo Viejo, and Heights of Chirua, Colombia (habits, crit.).

*Myioborus verticalis verticalis* Chapman, Bull. Amer. Mus. N. H., 36, p. 548, 1917—Colombia (Paramillo, Las Lomitas, San Antonio, near Popayan, Cerro Munchique, Gallera, La Sierra, Miraflores, Salento, Santa Elena, Barro Blanco, Rio Toché, El Eden, La Candela, near San Agustin, Andalucía, Fusugasugá, El Roble).

**Range.**—Subtropical zone of Venezuela (Mounts Roraima and Duida; north coast mountains east to Sucre), Colombia, and Ecuador.

13: Colombia (Bogotá, 6; Castilla, Cauca, 1; San Agustin, Huila, 1; Páramo de Tamá, 2); Venezuela (Maracay, Aragua, 1; Conejos, Mérida, 1; Sierra de Mérida, 1).

**\*Myioborus miniatus verticalis (Lafresnaye and d'Orbigny).**  
**RUFIOUS-CROWNED MYIOBORUS.**

*Setophaga verticalis* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 50, 1837—Ayupaya, Bolivia (type in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 330, pl. 35, fig. 1, 1840—Bolivia; Tschudi, Arch. Naturg., 10, (1), p. 276, 1844—Peru; idem, Unters. Faun. Peru., Aves, p. 191, 1846—eastern Peru; Sclater and Salvin, Proc. Zool. Soc. Lond., 1873, p. 185—San Antonio, Dept. Cuzco, Peru; idem, l.c., 1876, p. 16—Huiro and Potrero, Dept. Cuzco, Peru; Salvin, Ibis, 1878, p. 311—part, Bolivia and Peru; Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 223—Tambillo, Peru; Sclater and Salvin, l.c., 1879, p. 594—Tipuani, Yungas, Bolivia; Taczanowski, l.c., 1882, p. 7—Chirimoto, Peru; idem, Orn. Pér., 1, p. 481, 1884—Peruvian localities; Sharpe, Cat. Bds. Brit. Mus., 10, p. 420, 1885—part, spec. a-c, Bolivia (Tipuani) and Peru (San Antonio); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 332—La Gloria and Garita del Sol, Dept. Junín, Peru; idem, Ornith., 13, p. 107, 1906—Huaynapata, Peru.

*Setophaga verticalis verticalis* Hellmayr, Nov. Zool., 32, p. 178, 1925—Ayupaya, Bolivia.

*Myioborus verticalis* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 508—Monterico, Montaña de Vitoc, and Ropaybamba, Peru; Chapman, Bull. U. S. Nat. Mus., 117, p. 106, 1921—Idma and San Miguel Bridge, Peru.

*Myioborus verticalis verticalis* Bangs and Noble, Auk, 35, p. 458, 1918—Tabaconas and Huancabamba, Peru; Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 425, 1930—Huachipa, Peru (crit.).

**Range.**—Subtropical zone of Bolivia and Peru (east of the Cordillera de la Costa).<sup>1</sup>

6: Bolivia (Roquefalta, Cochabamba, 1); Peru (Hacienda Limón, near Balsas, 3; Huachipa, Huánuco, 2).

**\*Myioborus torquatus (Baird). COLLARED MYIOBORUS.**

*Setophaga torquata* Baird, Rev. Amer. Bds., 1, p. 261, May, 1865—San José, Costa Rica (type in U. S. National Museum); Salvin, Proc. Zool. Soc. Lond., 1867, p. 136—Cordillera de Tolé, Veragua; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 96, 1868—San José and La Palma, Costa Rica; Frantz, Journ. Orn., 17, p. 294, 1869—La Palma, Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 53—Volcan de Irazú, Costa Rica; Salvin, Ibis, 1878, p. 319—Costa Rica and Panama (Volcan de Chiriquí, Cordillera de Tolé) (monog.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 183, pl. 10, fig. 2, 1881—same localities; Nutting, Proc. U. S. Nat. Mus., 5, p. 495, 1882—Volcan de Irazú; Sharpe, Cat. Bds. Brit. Mus., 10, p. 424, 1885—Costa Rica and Veragua (Cordillera de Tolé); Zeledón, Anal. Mus.

<sup>1</sup> Specimens from northern Peru, while more or less intermediate in extent of white tail markings, appear as a whole to go better with the southern race.

**Additional specimens examined.**—Bolivia: Yungas of La Paz, 8; Ayupaya, 1 (the type).—Peru: Santo Domingo, 5; Inambari Val, 2; Caradoc, Marcapata, 2; Ropaybamba, 1; Garita del Sol, Vitoc, 1; Tambillo, Prov. Chota, 2.

Nac. Costa Rica, 1, p. 107, 1887—Volcan de Irazú; Bangs, Proc. New Engl. Zool. Cl., 3, p. 61, 1902—Boquete and Volcan de Chiriquí, Panama. *Myioborus torquatus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 735, 1902—Costa Rica and Chiriquí (monog.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 277, 1910—Coliblanco and Volcan de Turrialba, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 798, 1910—Costa Rica (Volcan de Turrialba, El Copey, Las Vueltas de Dota, La Estrella de Cartago, Burgos de Irazú, Escazú, Volcan de Irazú, Achióte de Póas, Cachí, La Hondura, Ujurrás de Térraba).

*Range*.—Highlands of Costa Rica and western Panama, east to Veragua (Cordillera de Tolé).<sup>1</sup>

13: Costa Rica (Coliblanco, 7; Irazú, 4; Volcan de Turrialba, 1); Panama (Boquete, 1).

**\**Myioborus ornatus ornatus* (Boissonneau). YELLOW-CROWNED MYIOBORUS.**

*Setophaga ornata* Boissonneau, Rev. Zool., 3, p. 70, 1840—Santa Fé de Bogotá, Colombia (type now in Museum of Comparative Zoology, Cambridge, Mass.;<sup>2</sup> cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 361, 1930); Bonaparte, Atti Sesta Riun. Sci. Ital. Milano, p. 405, 1845—Bogotá; Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 50, Oct., 1852—"Andes" (diag.); Sclater, l.c., 23, p. 144, 1855—Bogotá; idem, Cat. Coll. Amer. Bds., p. 37, 1862—Bogotá; Baird, Rev. Amer. Bds., 1, pp. 255, 258, 1865—Bogotá (in part); Wyatt, Ibis, 1871, p. 323—Potreras, Santander, Colombia; Salvin, Ibis, 1878, p. 315—Bogotá and Potreras, Colombia (monog.); Berlepsch, Journ. Orn., 32, p. 284, 1884—Bucaramanga; Sharpe, Cat. Bds. Brit. Mus., 10, p. 426, 1885—Bogotá.

*Setophaga flaveola* Lafresnaye, Rev. Zool., 7, p. 81, 1844—Colombie="Bogotá" (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 361, 1930;=juv.); Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—Bogotá (ex Lafresnaye).

*Setophaga leucomphomma* Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 49, pub. Oct., 1852—Bogotá (type in coll. of Lord Derby, now in Liverpool Museum;=juv.); Sclater, Cat. Coll. Amer. Bds., p. 37, 1862—Bogotá.

*Setophaga leucophomma* Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—Bogotá (ex Kaup).

*Myioborus ornatus* Chapman, Bull. Amer. Mus. N. H., 36, p. 549, 1917—Chipaque, El Piñon, and El Roble, eastern Andes of Colombia (crit.).

*Range*.—Temperate zone of the eastern Andes of Colombia and of the adjoining district of Tachira, Venezuela (Páramo de Tamá).<sup>3</sup>

<sup>1</sup> No material seen from Veragua. Five Chiriquí skins agree very well with a Costa Rican series.

<sup>2</sup> Another alleged type, bought from Boissonneau in 1841, is in the Vienna Museum.

<sup>3</sup> I find much variation in the intensity of the yellow color on the crown and under parts; but whether this has any geographical significance I am unable to

10: Colombia ("Bogotá," 2; Cachiri, Santander, 2; Páramo de Tamá, 3; unspecified, 1); Venezuela (Páramo de Tamá, 2).

**\*Myioborus ornatus chrysops (Salvin).<sup>1</sup> GOLDEN-FACED MYIOBORUS.**

*Setophaga chrysops* Salvin, Ibis, (4), 2, p. 314, pl. 7, fig. 2, 1878—Santa Elena, Antioquia, Colombia (type in Salvin-Godman Collection, now in British Museum); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 495—Retiro, Santa Elena, and Frontino (eggs descr.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 427, 1885—Colombia (Santa Elena, Frontino, and Retiro, Antioquia).

*Setophaga flaveola* (not of Lafresnaye) Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 50, pub. Oct., 1852—"Columbia"—Páramo of Popayan (diag.).

*Myioborus chrysops* Piguet, Mem. Soc. Neuchât. Sci. Nat., 5, p. 808, 1914—Medellin; Chapman, Bull. Amer. Mus. N. H., 36, p. 549, 1917—Paramillo, Andes west of Popayan, Cocal, Laguneta, Santa Isabel, Santa Elena, Rio Toché, El Eden, Almaguer, and Valle de las Pappas, Colombia.

**Range.**—Temperate zone of the western and central Andes of Colombia.

3: Colombia (Almaguer, central Andes, Cauca, 1; Laguneta, west Quindio Andes, Cauca, 1; unspecified, 1).

**Myioborus melanocephalus bolivianus Chapman.<sup>2</sup> BOLIVIAN MYIOBORUS.**

say, nearly all the specimens examined being native "Bogotá" skins. According to Chapman, birds from the eastern slope average paler.

**Additional material examined.**—Colombia: Bucaramanga, 1; "Bogotá," 20.

<sup>1</sup> *Myioborus ornatus chrysops* (Salvin): Similar to *M. o. ornatus*, but chiefly distinguished by having the loreal and auricular region deep yellow instead of white, and the yellow color on the upper part of the head restricted to the forehead, leaving the posterior portion blackish like the hind neck. The yellow color on the head and under parts is generally of a richer tone.

**Additional material examined.**—Western Andes: Páramo of Popayan, 6.—Central Andes: Santa Elena, 3; Frontino, 1.

<sup>2</sup> *Myioborus melanocephalus bolivianus* Chapman: Exceedingly close to *M. m. melanocephalus*, but under parts, particularly on throat and chest, slightly paler, lemon chrome rather than light cadmium, and white area on the inner web of the third rectrix (from without) generally more extensive. Wing (adult male), 67½–71; tail, 68–74.

Rather a poor race, whose only constant character consists of the paler yellow under parts, although certain Peruvian individuals are very nearly as light-bellied as Bolivian birds. I find much individual variation in the extent of the yellow markings on the front and sides of the head, and while the white area on the lateral tail feathers, especially on the third pair, is, as a rule, more extended in Bolivian specimens, some from Peru, including one from Chachapoyas, have just as much white in the tail.

**Material examined.**—Bolivia: Cocapata, 11; San Cristóbal, 1.

*Myioborus melanocephalus bolivianus* Chapman, Proc. Biol. Soc. Wash., 32, p. 265, 1919—Incachaca, Prov. Cochabamba, Bolivia (type in the American Museum of Natural History, New York).

*Setophaga melanocephala* (not of Tschudi) Salvin, Ibis, 1878, p. 312—part, Simacu, Bolivia; Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—Simacu and Tilotilo, Bolivia; Sharpe, Cat. Bds. Brit. Mus., 10, p. 427, 1885—part, spec. e-g, Simacu, Bolivia; Allen, Bull. Amer. Mus. N. H., 2, p. 79, 1889—Bolivia.

*Range*.—Humid Temperate zone of western Bolivia (depts. of La Paz and Cochabamba).

**\**Myioborus melanocephalus melanocephalus* (Tschudi).  
BLACK-CROWNED MYIOBORUS.**

*Setophaga melanocephala* Tschudi, Arch. Naturg., 10, (1), p. 276, 1844—Peru (type in Neuchâtel Museum); idem, Unters. Faun. Peru., Aves, p. 192, pl. 12, fig. 1, 1846—Peru; Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 50, pub. Oct., 1852—Peru (diag.); Salvin, Ibis, 1878, p. 312—part, Peru (Chilpes, Pumamarca, Khachupata); Taczanowski, Proc. Zool. Soc. Lond., 1882, p. 7—Chachapoyas and Tamiapampa (descr. juv.); idem, Orn. Pér., 1, p. 479, 1884—Peru (Higos, Ropaybamba, Pumamarca, Chilpes, Chachapoyas); Sharpe, Cat. Bds. Brit. Mus., 10, p. 427, 1885—part, spec. a-d, Pumamarca, Tamiapampa, and Khachupata, Peru; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 332—Garita del Sol, Maraynioc, and Vitoc, Dept. Junín.

*Myioborus melanocephalus* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Chilpes and Pumamarca, Dept. Junín.

*Myioborus melanocephalus melanocephalus* Chapman, Bull. U. S. Nat. Mus., 117, p. 106, 1921—San Miguel Bridge and Torontoy, Urubamba, Peru; Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 426, 1930—Huánuco Mountains and Pano, Dept. Huánuco (crit.).

*Range*.—Humid Temperate zone of eastern Peru, from Dept. Amazonas (east of the Marañón) south to Marcapata.<sup>1</sup>

10: Peru (Molinopampa, 3; Huánuco Mountains, 3; Pano, Huánuco, 4).

***Myioborus melanocephalus griseonuchus* Chapman.<sup>2</sup> GRAY-  
NAPED MYIOBORUS.**

<sup>1</sup> Birds from extreme southeastern Peru (Santo Domingo and Marcapata) sometimes closely approach the Bolivian form (*M. m. bolivianus*) in the paleness of the under parts. One of the Molinopampa birds shows traces of rufous margins to the bases of the central occipital feathers, thus pointing to *M. bairdi*, which is clearly conspecific.

*Additional material examined*.—Peru: Chachapoyas, 3; Garita del Sol, 2; San Miguel Bridge, Urubamba, 7; Santo Domingo, 4; Marcapata, 5.

<sup>2</sup> *Myioborus melanocephalus griseonuchus* Chapman: Similar to *M. m. bairdi*, but with hardly any black on the nape; the brown crown patch on average smaller;

*Myioborus bairdi griseonuchus* Chapman, Amer. Mus. Nov., 250, p. 5, 1927—Taulis, Pacific slope northeast of Pacasmayo, Peru (type in the American Museum of Natural History, New York).

*Setophaga bairdi* (not of Salvin) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 224—Chota, Peru; idem, Orn. Pér., 1, p. 480, 1884—Chota and Cutervo, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 423, 1885—part, Peru.

*Myioborus bairdi* Chapman, Bull. Amer. Mus. N. H., 55, p. 598, 1926—part, Peru (El Tambo).

**Range.**—Humid Temperate zone of northwestern Peru, in depts. of Piura (El Tambo) and Cajamarca (Taulis; Chugur; Chota).

**\**Myioborus melanocephalus bairdi* Salvin. BAIRD'S MYIOBORUS.**

*Setophaga bairdi* Salvin, Ibis, (4), 2, p. 317, pl. 8, fig. 1, 1878—Sical, Ecuador (type in Salvin-Godman Collection, now in British Museum); Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 286—Cechce; idem, l.c., 1885, p. 75—San Rafael and Mapoto; Sharpe, Cat. Bds. Brit. Mus., 10, p. 423, 1885—part, Ecuador (Matos, "Quito," Sical, San Lucas); Hartert, Nov. Zool., 5, p. 480, 1898—Mount Cayambe; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Huaca, El Troje, "Gualea," Chaupi, "Nanegal," "Intag," Chinguil (Lloa), Frutillas, Lloa, Niebli, Pululagua, and Papallacta; Goodfellow, Ibis, 1901, p. 315—Milligalli (western side of Corazón), western Pichincha, and Papallacta.

*Myioborus bairdi* Ménégaux, Miss. Serv. Géogr. Armée Mes. Arc Mérid. Equat., 9, p. B. 72, 1911—Lanlin and Pichincha; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—Chinguil and below Nono; Chapman, Bull. Amer. Mus. N. H., 55, p. 598, 1926—part, Ecuador (Hacienda Garzón, Pichincha, Yanacocha, Verdecocha, Urbina, Taraguacocha, above Loja, Tambillo, Zuna, Rio Upano, Asilan, upper Sumaco, above Baeza, Rio Sardinias, below Papallacta, and Oyacachi); Berlioz, Bull. Mus. Hist. Nat. Paris, 34, p. 73, 1928—Pilon and Aluguincho; idem, l.c., (2), 4, p. 625, 1932—Las Palmas and El Portete de Tarqui.

*Setophaga ruficoronata* (not of Kaup) Sclater, Proc. Zool. Soc. Lond., 26, p. 550, 1858—Matos; idem, l.c., 28, p. 74, 1860—Lloa; idem, Cat. Coll. Amer. Bds., p. 37, 1862—Matos; Baird, Rev. Amer. Bds., 1, p. 255, 1865—Ecuador (crit.).

**Range.**—Humid Temperate zone of Ecuador.<sup>1</sup>

2: Ecuador (Chical, Prov. Cañar, 1; Quito, 1).

the third pair of rectrices (from without) usually with a terminal wedge-shaped white marking.

With only a single example (from Chota) before me, I am not able to speak with confidence of the characters of this race. The bird certainly has less black admixture on the nape than any specimen of typical *bairdi* I have seen, but in color of crown or extent of white on the third rectrix it does not differ from various Ecuadorian examples.

<sup>1</sup> Twenty specimens from western and four from eastern Ecuador examined.

**\*Myioborus ruficoronatus (Kaup).<sup>1</sup> CHESTNUT-CROWNED MYIOBORUS.**

*Setophaga ruficoronata* Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 49, pub. Oct., 1852—no locality indicated (the type in the Derby Collection, now in Liverpool Museum, is said to be from [no doubt, above] Cali, Colombia); Salvin, Ibis, 1878, p. 316, pl. 7, fig. 1—"Cali," Colombia, and Yauayaca, Ecuador (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 425, 1885—Colombia (Pasto) and Ecuador (foot of Pichincha and Yauayaca); Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 75—San Rafael, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 10, 1899—Ecuador.

*Myioborus ruficoronatus* Chapman, Bull. Amer. Mus. N. H., '55, p. 598, 1926—Oyacachi, Ecuador.

(?) *Setophaga ornata* (not of Boissonneau) Baird, Rev. Amer. Bds., 1, p. 255, 1865—part (spec. in coll. of Academy of Natural Sciences, Philadelphia).

**Range.**—Humid Temperate zone of southern Colombia (Pasto; above Cali) and Ecuador (foot of Mount Pichincha; San Rafael; Oyacachi).

1: Ecuador (San Lucas, 1).

**\*Myioborus albifrons (Sclater and Salvin).<sup>2</sup> WHITE-FRONTED MYIOBORUS.**

*Setophaga albifrons* Sclater and Salvin, Proc. Zool. Soc. Lond., "1870," pp. 780, 784, pub. 1871—Sierra Nevada of Mérida, Venezuela (type in coll. of P. L. Sclater, now in British Museum); Salvin, Ibis, 1878, p. 318, pl. 8, fig. 2—Mérida, Venezuela (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 422, 1885—Sierra Nevada of Mérida.

**Range.**—Humid Temperate zone of western Venezuela (Cordillera of Mérida).

2: Venezuela (Escorial, 1; Sierra Nevada, Mérida, 1).

<sup>1</sup> *Myioborus ruficoronatus* (Kaup) is a very little-known form, of which but a few specimens have been recorded. Aside from its larger size, it differs from *M. m. bairdi* principally by the absence of black on the anterior crown, the forehead being bright yellow like the orbicular region. There is but a short black lateral border to the amber-brown crown, much narrower than in *M. m. bairdi* and not reaching the eye, while the black loreal spot is barely suggested by an obsolete dusky streak. Dr. Chapman mentions various specimens of *M. m. bairdi* (from eastern Ecuador) as approaching *M. ruficoronatus* in the coloration of the forehead, yet both species are listed by him from Oyacachi. Under these circumstances the proper understanding of their relationship seems to require further investigation.

**Material examined.**—Ecuador: Oyacachi, 1; unspecified, 1.

<sup>2</sup> *Myioborus albifrons* (Sclater and Salvin): Most nearly related to *M. melanocephalus bairdi*, but frontal edge, lores, and orbital ring pure white instead of yellow, and rufous crown feathers tipped with black. Size about the same.

The yellow of the under parts varies much the same as in *M. m. bairdi*, with which *M. albifrons* may ultimately prove to be conspecific, although the characters given above serve to distinguish it at a glance.

**Additional material examined.**—Venezuela: Sierra of Mérida, 5.

**\*Myioborus flavivertex (Salvin).<sup>1</sup> YELLOW-CROWNED MYIOBORUS.**

*Setophaga flavivertex* Salvin, Ibis, (5), 5, p. 129, pl. 4, 1887—neighborhood of the Sierra Nevada of Santa Marta, Colombia (type in Salvin-Godman Collection, now in British Museum); Bangs, Proc. Biol. Soc. Wash., 12, p. 180, 1898—Macotama; Allen, Bull. Amer. Mus. N. H., 13, p. 176, 1900—El Libano (nest descr.).

*Myioborus flavivertex* Todd and Carriker, Ann. Carnegie Mus., 14, p. 443, 1922—El Libano, San Lorenzo, Sierra Nevada de Santa Marta, San Miguel, Cerro de Caracas, Macotama, Páramo de Mamarongo, and Heights of Chirua (habits).

**Range.**—Subtropical and Temperate zones of the Santa Marta region, northern Colombia.

1: Colombia (San Lorenzo, Santa Marta, 1).

**\*Myioborus bruniceps bruniceps (Lafresnaye and d'Orbigny).  
BROWN-CAPPED MYIOBORUS.**

*Setophaga bruniceps* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 50, 1837—Ayupaya, Bolivia (type in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 330, pl. 35, fig. 1, 1840—Prov. Yungas, Bolivia; Burmeister, Reise La Plata St., 2, p. 473, 1861—Tucumán (crit.); Hartert and Venturi, Nov. Zool., 16, p. 166, 1909—Tucumán; Hellmayr, l.c., 32, p. 178, 1925—Bolivia and Argentina (crit.).

*Setophaga bruniceps* Baird, Rev. Amer. Bds., 1, p. 258, 1865—Bolivia (crit.); Salvin, Ibis, 1878, p. 312—Bolivia (monog.); White, Proc. Zool. Soc. Lond., 1882, p. 595—Sierra de Totoral, Catamarca; Sharpe, Cat. Bds. Brit. Mus., 10, p. 428, 1885—Catamarca and Bolivia; Sclater and Hudson, Arg. Orn., 1, p. 21, 1888—Sierra de Totoral, Catamarca; Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 5, 1897—San Lorenzo, Jujuy, and Lesser Salta; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 173, 1902—Dept. Taff, Tucumán; Bruch, Rev. Mus. La Plata, 11, p. 257, 1904—Orán, Salta; Lillo, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Dept. Taff, Tucumán.

*Setophaga bruniceps* Koslowsky, Rev. Mus. La Plata, 6, p. 289, 1895—Catamarca.

*Setophaga virescens* Burmeister, Journ. Orn., 8, p. 251, 1860—Tucumán (type in Halle Museum examined).

*Myioborus bruniceps* Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 369, 1910 (range in Argentina); Dinelli, El Hornero, 1, p. 61, 1918—north-western Argentina (habits); Giacomelli, l.c., 3, p. 67, 1923—La Rioja;

<sup>1</sup> *Myioborus flavivertex* (Salvin): Most nearly, and possibly subspecifically, related to *M. albifrons*, but readily distinguished by having the crown lemon yellow instead of light rufous; the back olivaceous green instead of slate gray, with the edges to the remiges more olivaceous, less slaty; the throat and chest tinged with ochraceous, etc.

No material is at present available, but the specimens examined several years ago in the collection of the Carnegie Museum appeared to me well differentiated from *M. albifrons*, although the two birds may ultimately prove to be conspecific.



Wetmore, Bull. U. S. Nat. Mus., 133, p. 370, 1926—Sierra San Xavier, above Tafi Viejo, Tucumán.

*Range*.—Subtropical zone of Bolivia and northwestern Argentina, south to La Rioja and Catamarca.<sup>1</sup>

2: Argentina (Aconquija, Tucumán, 1; Concepción, Tucumán, 1).

**Myioborus bruniceps castaneocapillus (Cabanis).<sup>2</sup> RORAIMA MYIOBORUS.**

*Setophaga castaneocapilla* Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 667, "1848" [=1849]—Roraima, British Guiana (type in Berlin Museum); Baird, Rev. Amer. Bds., 1, p. 259, 1865 (crit.); Salvin, Ibis, 1878, p. 313—Roraima (monog.); idem, Ibis, 1885, p. 203—Roraima; idem, Ibis, 1886, p. 500—Mount Twék-quay, British Guiana.

*Setophaga castaneicapilla* Sharpe, Cat. Bds. Brit. Mus., 10, p. 429, 1885—Roraima.

*Myioborus castaneicapillus* Chubb, Bds. Brit. Guiana, 2, p. 415, pl. 6, fig. 2, 1921—Roraima and "Caramang River," British Guiana; Chapman, Bull. Amer. Mus. N. H., 63, p. 116, 1931—Roraima (Arabupu, Philipp Camp, Rondon Camp).

*Setophaga ruficapilla* "Cab." Kaup, Proc. Zool. Soc. Lond., 19, "1851," p. 49, Oct., 1852—Guiana (diag.; lapsus for *S. castaneocapilla* Cabanis).

*Range*.—Subtropical zone of Mount Twék-quay, British Guiana, and Mount Roraima, on the confines of British Guiana and Venezuela.

**Myioborus bruniceps duidae Chapman.<sup>3</sup> DUIDA MYIOBORUS.**

*Myioborus duidae* Chapman, Amer. Mus. Nov., 380, p. 24, 1929—Central Camp, Mount Duida, Venezuela (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 63, p. 116, 1931—Mount Duida.

*Range*.—Subtropical zone of Mount Duida, Venezuela.

<sup>1</sup> Argentine specimens appear to be inseparable. The type of *S. virescens* is aberrant, lacking as it does the white orbital rim and supraloral streak, which, in other Argentine birds, are just as well-marked as in Bolivian examples.

*Additional material examined*.—Bolivia: Yungas (the type), 1; Valle Grande, 2; Santa Ana, 1; Quebrada Onda, 1.—Argentina: Metán, Salta, 3; Tafi, Tucumán, 4; "Tucumán," 1.

<sup>2</sup> *Myioborus bruniceps castaneocapillus* (Cabanis) resembles *M. b. bruniceps* in the (lemon chrome) coloration of the posterior under parts, but has the throat and foreneck tinged with primuline yellow and lacks the yellowish citrine dorsal area, the whole back and hind neck being dark hair brown, while the white terminal zone of the lateral rectrices is more extended, especially on the outermost pair, where it reaches the very base.

*Material examined*.—British Guiana: Roraima, 10; Mount Twék-quay, 2.

<sup>3</sup> *Myioborus bruniceps duidae* Chapman: Closely similar to *M. b. castaneocapillus*, but under parts bright orange instead of lemon chrome, the dorsal surface less brownish, deep grayish olive rather than hair brown, and with a conspicuous white supraloral streak. Wing, 68–70, (female) 64; tail, 68–69, (female) 65.

*Material examined*.—Venezuela: Mount Duida, 4.

Genus EUTHLYPIS Cabanis<sup>1</sup>

*Euthlypis* Cabanis, Mus. Hein., 1, p. 18, Oct., 1851—type, by orig. desig.,  
*Euthlypis lacrymosa* Cabanis=*Basileuterus lacrymosa* Bonaparte.

***Euthlypis lacrymosa tephra* Ridgway.<sup>2</sup> WESTERN FAN-TAILED  
WARBLER.**

*Euthlypis lacrymosa tephra* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 738, 1902—Hacienda de San Rafael, Chihuahua, Mexico (type in U. S. National Museum); Miller, Bull. Amer. Mus. N. H., 21, p. 366, 1905—Escuinapa, Sinaloa; McLellan, Proc. Calif. Acad. Sci., (4), 16, p. 44, 1927—near San Blas, Nayarit; Grinnell and Lamb, Condor, 29, p. 126, 1927—Santo Domingo, Lower California (Dec. 31, 1925); Grinnell, Univ. Calif. Pub. Zool., 32, p. 206, 1928—same locality; van Rossem, Trans. San Diego Soc. N. H., 6, p. 286, 1931—Guircocoba, Sonora (crit.).

*Euthlypis lacrymosa* (not of Cabanis) Lawrence, Mem. Bost. Soc. N. H., 2, p. 270, 1874—Mazatlan, Sinaloa (habits); Jouy, Proc. U. S. Nat. Mus., 16, p. 778, 1893—Barránca Ibarra, Jalisco (habits).

*Setophaga lacrymosa* Salvin, Ibis, 1878, p. 320—part, Mazatlan; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 184, 1881—part, Mazatlan.

*Range*.—Western Mexico, from Sonora and Chihuahua south to Jalisco; casual in Lower California (Santo Domingo, Dec. 31, 1925).

***Euthlypis lacrymosa lacrymosa* (Bonaparte). FAN-TAILED  
WARBLER.**

*Basileuterus lacrymosa* Bonaparte,<sup>3</sup> Consp. Gen. Av., 1, (2), p. 314, end of 1850—Mexico (type in Berlin Museum).

*Euthlypis lacrymosa*<sup>4</sup> Cabanis,<sup>5</sup> Mus. Hein., 1, p. 19 (footnote), Oct., 1851—Lagunas, Mexico (type in Berlin Museum); Sclater, Proc. Zool. Soc. Lond., 24, p. 291, 1856—Cordova, Vera Cruz; idem, l.c., 27, p. 363, 1859—Jalapa, Vera Cruz; idem, Cat. Coll. Amer. Bds., p. 36, 1862—Jalapa; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—Penuela, near Cordova, Vera Cruz; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 138, 1886—Acatlan, Puebla.

<sup>1</sup> A very poor genus which had better be united to *Basileuterus*.

<sup>2</sup> This race is of very doubtful validity, since I am unable to appreciate any of its supposed characters in the two specimens (both from Jalisco) before me. Van Rossem (l.c.) believes its separation to be due to post mortem change of the original specimens. Without a good series of fresh skins the problem cannot be satisfactorily solved.

<sup>3</sup> The evidence produced by Zimmer (Field Mus. Nat. Hist., Zool. Ser., 16, pp. 68, 122, 1926) seems to give priority to Bonaparte's name, unless the advance sheets of the "Museum Heineanum," that were in circulation long before the actual issue of the work, be considered as constituting publication. Both Bonaparte's and Cabanis's descriptions were based on the very same specimen from Lagunas, Mexico, in the Berlin Museum.

<sup>4</sup> Often spelled "*lachrymosa*."

*Euthlypis lachrymosa lachrymosa* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 736, 1902—part, southeastern Mexico (excl. of Chiapas); Phillips, Auk, 28, p. 86, 1911—Santa Leonor, Tamaulipas; Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 484, 1927—Presidio, Vera Cruz; idem, l.c., 68, p. 401, 1928—Chivelá, Oaxaca.

*Setophaga lachrymosa* Baird, Rev. Amer. Bds., 1, p. 263, 1865—part, Mexico; Salvin, Ibis, 1878, p. 320—part, eastern Mexico (Lagunas, Cordova, Jalapa); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 184, pl. 11, fig. 2, 1881—part, Mexico (Lagunas, Vera Cruz, Cordova, Jalapa, Santa Efigenia); Sharpe, Cat. Bds. Brit. Mus., 10, p. 430, 1885—part, spec. a-c, Jalapa, Cordova, and Santa Efigenia (Tehuantepec), Mexico.

*Range*.—Tropical zone of eastern Mexico, from Tamaulipas (Santa Leonor) south to Guerrero, Oaxaca, and Vera Cruz.

**\**Euthlypis lachrymosa schistacea* Dickey and van Rossem.<sup>1</sup>**  
SOUTHERN FAN-TAILED WARBLER.

*Euthlypis lachrymosa schistacea* Dickey and van Rossem, Condor, 28, p. 270, 1926—Pine Peaks, Volcan Conchagua, El Salvador (type in coll. of Donald R. Dickey, Pasadena); Griscom, Bull. Amer. Mus. N. H., 64, p. 342, 1932—western Guatemala (crit.).

*Euthlypis lac(h)rymosa* Sclater and Salvin, Ibis, 1860, p. 274—Alotenango, Guatemala; Nutting, Proc. U. S. Nat. Mus., 6, p. 138, 1883—Ometépe, Nicaragua.

*Euthlypis lachrymosa lachrymosa* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 736, 1902—part, Chiapas (Tuxtla), Guatemala, and Nicaragua (Ometépe); Rendahl, Ark. Zool., 12, No. 8, p. 36, 1919—Ometépe, Nicaragua.

*Setophaga lachrymosa* (not *Basileuterus lachrymosa* Bonaparte) Baird, Rev. Amer. Bds., 1, p. 263, 1865—part, Savanna Grande, Guatemala; Salvin, Ibis, 1878, p. 320—part, forests between the volcanoes of Agua and Fuego, Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 184, 1881—part, Guatemala (Alotenango and Savanna Grande); Sharpe, Cat. Bds. Brit. Mus., 10, p. 430, 1885—part, spec. d-i, Guatemala (Volcan de Agua, Barranca Honda, Alotenango).

*Range*.—Tropical zone of western Chiapas (Tuxtla), western Guatemala, El Salvador, and northwestern Nicaragua.

1: Guatemala (Barranca Honda, 1).

**Genus ERGATICUS Baird**

*Ergaticus* Baird, Rev. Amer. Bds., 1, pp. 237, 264, 1865—type, by orig. desig., *Setophaga rubra* Swainson.

<sup>1</sup> *Euthlypis lachrymosa schistacea* Dickey and van Rossem: Similar in coloration to *E. l. lachrymosa*, but with larger, stouter bill.

While we have not seen any typical Salvador material, three adults from Guatemala (Volcan de Agua) and one from Nicaragua (Lake Managua region) have larger bills than any specimen of more northern origin. In coloration I cannot detect the slightest difference from Mexican birds, this finding being in agreement with van Rossem's recent conclusion (Trans. San Diego Soc. N. H., 6, pp. 286-287, 1931).

**\*Ergaticus ruber ruber (Swainson). RED WARBLER.**

*Setophaga rubra* Swainson, Phil. Mag., (n.s.), 1, p. 368, May, 1827—Valadolid, Michoacan, Mexico (type in Bullock Collection); idem, Anim. Menag., p. 293, 1837—Toluca, Mexico.

*Cardellina rubra* Cassin, Illust. Bds. Calif., etc., p. 265, pl. 43, 1854—Mexico; Sclater, Proc. Zool. Soc. Lond., 24, p. 292, 1856—El Jacale, Vera Cruz; idem, l.c., 26, p. 299, 1858—La Parada, Oaxaca; idem, l.c., 27, pp. 363, 374, 1859—Jalapa (Vera Cruz), and Llano Verde and Totontepec (Oaxaca); idem, l.c., 1864, p. 173—vicinity of Mexico City; Baird, Rev. Amer. Bds., 1, p. 264, 1865—Mexico (Jalapa, Mirador, Orizaba); Dugès, La Naturelle, 1, p. 140, 1868—valley of Mexico; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—alpine region of Vera Cruz; Finsch, Abhandl. Naturw. Ver. Bremen, 2, p. 329, 1870—"Mazatlan," errore.

*Ergaticus ruber* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 164, 1881—Mexico; Sharpe, Cat. Bds. Brit. Mus., 10, p. 406, 1885—near Mexico City, Jalapa, Oaxaca, and Ciudad Durango, Mexico; Ferrari-Perez, Proc. U. S. Nat. Mus., 9, p. 138, 1886—Puebla (Istacchuatl, Chachapa, Teziutlan); Cox, Auk, 12, p. 358, 1895—Mount Orizaba; Chapman, Bull. Amer. Mus. N. H., 10, p. 40, 1898—Las Vegas, Vera Cruz; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 759, 1902 (monog., full bibliog.).

*Sylvia miniata* Lafresnaye, Mag. Zool., 6, cl. 2, pl. 54, 1836—Las Vegas, near Jalapa, Mexico (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 362, 1930).

*Parus leucotis* Giraud, Descr. Sixteen Spec. N. Amer. Birds, pl. [4], fig. 1, 1841—"Texas" (type probably in U. S. National Museum); Sclater, Proc. Zool. Soc. Lond., 23, p. 65, 1855 (crit.).

**Range.**—Temperate zone of Mexico, from Sinaloa and Durango south to Vera Cruz and Oaxaca.<sup>1</sup>

1: Mexico (Amecameca, 1).

**\*Ergaticus ruber versicolor (Salvin).<sup>2</sup> PINK-HEADED WARBLER.**

*Cardellina versicolor* Salvin, Proc. Zool. Soc. Lond., 1863, p. 188, pl. 24, fig. 1—Volcan de Fuego, Totonicapam, and Chilasco, Guatemala (type, from Chilasco, now in British Museum); idem, Ibis, 1866, p. 192—same localities; Baird, Rev. Amer. Bds., 1, p. 265, 1865—Totonicapam (crit.).

*Ergaticus versicolor* Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 165, pl. 11, fig. 1, 1881—Guatemala (Volcan de Fuego, Sololá, Totonicapam, Chilasco); Sharpe, Cat. Bds. Brit. Mus., 10, p. 407, 1885—same localities; Nelson, Auk, 15, p. 159, 1898—central Chiapas; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 760, 1902—Guatemala and Chiapas, Mexico (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 131, 1907—

<sup>1</sup> Bonaparte's record of "*Setophaga rubra*" from Guatemala (cf. Proc. Zool. Soc. Lond., 5, p. 118, 1837) is unreliable.

<sup>2</sup> A strongly marked form, although conspecific with *E. ruber* according to my point of view.

cypress region of Guatemala; Griscom, Bull. Amer. Mus. N. H., 64, p. 346, 1932—Guatemala (Chichicastenango, San Mateo, Santa Ilania, Zanjón, Tecpam, Quezaltenango).

*Range*.—Temperate zone of western Guatemala and extreme southern Mexico (Pinabete and San Cristóbal, State of Chiapas).

10: Guatemala (Quezaltenango, 1; Sierra Santa Elena, 1; near Tecpam, 7; Volcan de Fuego, 1).

### Genus **BASILEUTERUS** Cabanis

*Basileuterus* Cabanis,<sup>1</sup> in Schomburgk, Reisen Brit. Guiana, 3, p. 666, "1848" [=1849]—type, by monotypy, *Basileuterus vermicivorus* Cabanis (not *Sylvia vermicivora* Vieillot)=*Basileuterus culicivorus auricapillus* (Swainson).<sup>2</sup>

*Myiothlypis* Bonaparte,<sup>3</sup> Consp. Gen. Av., 1, (2), p. 311, end of 1850—type, by subs. desig. (Cabanis, Mus. Hein., 1, p. 17, Oct., 1851), *Trichas nigro-cristatus* Lafresnaye.

*Idioles* Baird, Rev. Amer. Bds., 1, p. 247, 1865—type, by orig. desig., *Selophaga rufifrons* Swainson.

*Phaeothlypis* Todd,<sup>4</sup> Proc. U. S. Nat. Mus., 74, art. 7, p. 8, 1929—type, by orig. desig., *Muscicapa fulvicauda* Spix.

### \***Basileuterus nigro-cristatus nigro-cristatus** (Lafresnaye). BLACK-CRESTED WARBLER.

*Trichas nigro-cristatus* Lafresnaye, Rev. Zool., 3, p. 230, 1840—Santa Fé de Bogotá, Colombia (type in coll. of F. de Lafresnaye, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 362, 1930).

*Trichas nigrocristata* Bonaparte, Atti Sesta Riun. Sci. Ital. Milano, 1844, p. 405, 1845—Santa Fé de Bogotá.

<sup>1</sup> *Basileuterus* Cabanis (Arch. Naturg., 13, (1), p. 316, 1847) is a nomen nudum.

<sup>2</sup> Cabanis, in creating the generic division *Basileuterus*, evidently intended to base it upon Azara's "Contramaestre coronado," for he states that the members of his new genus differ from *Myiodiodes* Audubon [= *Wilsonia* Bonaparte] by basally wider bill and less pointed wings—characters which correspond very well indeed to the warblers of the group known as *Basileuterus*, but cannot by any means be applied to *Helmitheros vermicivorus* (Gmelin). The fact of his having misapplied the specific name of Vieillot, who, moreover, was not its original author, appears to me of little importance in the face of his unmistakable generic diagnosis. Besides, Cabanis was well aware of the wide distinction between the "Contramaestre coronado" and the Worm-eating Warbler of North America, confused under one heading by Vieillot.

<sup>3</sup> I fully concur with Mr. Zimmer (Field Mus. Nat. Hist., Zool. Ser., 17, p. 429, 1930) that *Myiothlypis* is not properly separable.

<sup>4</sup> While admitting that this subdivision differs by certain structural characters from the other members of the genus, *B. fulvicauda* is, in other respects, so closely related to *B. rivularis*, that generic separation would only serve to obscure their natural affinities.

*Myiothlypis nigrocristata* Cabanis, Mus. Hein., 1, p. 17, "1850" [=Oct., 1851]—Colombia.

*Myiothlypis nigrocristatus* Chapman, Bull. Amer. Mus. N. H., 36, p. 549, 1917—Santa Isabel, El Eden, Valle de las Pappas, Chipaque, El Roble, and El Piñon, central and eastern Andes of Colombia; idem, l.c., 55, p. 599, 1926—Chunchi, Hacienda Garzón, below Cumbaya, Yanacocha, above Baeza, Macas region, and upper Sumaco, Ecuador; Berlioz, Bull. Mus. Hist. Nat. Paris, 34, p. 73, 1928—Aluguincho, Ecuador.

*Myiothlypis nigriristatus* Bonaparte, Consp. Gen. Av., 1, (2), p. 311, end of 1850—Bogotá; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 72, 1911—Chorillos, Lloa, and "Quito," Ecuador; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—road to Nanegal and below Lloa, Ecuador.

*Myiothlypis nigriristata* Sclater, Proc. Zool. Soc. Lond., 23, p. 143, 1855—Bogotá.

*Basileuterus nigri-cristatus* Sclater, Proc. Zool. Soc. Lond., 27, p. 440, 1859—"Rio Napo"; idem, l.c., 28, p. 74, 1860—Guápulo, Ecuador; idem, Cat. Coll. Amer. Bds., p. 36, 1862—Guápulo (Ecuador), Bogotá, and "Brazil"; Baird, Rev. Amer. Bds., 1, p. 251, 1865 (synon.); Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—Mérida, Venezuela; idem, l.c., 1879, p. 494—Santa Elena, Antioquia, Colombia (nest and egg descr.); Berlepsch and Taczanowski, l.c., 1884, p. 286—Cayandeled and Cechce, Ecuador; idem, l.c., 1885, p. 74—San Rafael, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 380, 1885—part, Venezuela (Mérida), Colombia (Medellin, Santa Elena, Bogotá), and Ecuador (Guápulo, Intac, "Quito"); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1899—Pun and Nanegal, Ecuador.

*Basileuterus nigrocristatus nigrocristatus* Hellmayr, Nov. Zool., 21, p. 161, 1914—Colombia and western Venezuela (Mérida); idem, Arch. Naturg., 90, A, Heft 2, p. 155, 1924—Galipán, Cerro del Avila, and Silla de Caracas, Venezuela (crit.).

*Basileuterus nigrivertex* (not of Salvin) Goodfellow, Ibis, 1901, p. 315—Intac, Guala, and Milligalli, Ecuador (spec. examined).

*Myiodioctes pusillus* (?) (not *Muscicapa pusilla* Wilson) Pelzeln, Verh. Zool. Bot. Gesells. Wien, 26, p. 769, 1876—Ecuador.

*Myiodioctes meridionalis* Pelzeln, Verh. Zool. Bot. Gesells. Wien, 32, p. 446, 1882—Ecuador (type in Vienna Museum examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 437, 1885 (ex Pelzeln).

*Basileuterus nigrocristatus meridionalis* Hellmayr, Nov. Zool., 21, p. 160, 1914—Ecuador (crit.).

**Range.**—Upper Subtropical and Humid Temperate zones of western Venezuela (east to the Silla de Caracas), eastern and central Andes of Colombia, and Ecuador.<sup>1</sup>

<sup>1</sup> Subdivision of this form appears to be impracticable, though at one time I attempted to revive Pelzeln's name *meridionalis* for the inhabitants of Ecuador. The latter, it must be admitted, are on average somewhat smaller and frequently have the black of the crown less extended posteriorly, but so many specimens

8: Colombia (Bogotá, 2; El Piñon, 1; unspecified, 1); Venezuela (Escorial, Mérida, 1; Hechisera, Mérida, 1; Páramo de Tamá, Tachira, 2).

**\**Basileuterus nigro-cristatus nigrivertex* Salvin.<sup>1</sup> PERUVIAN BLACK-CRESTED WARBLER.**

*Basileuterus nigrivertex* Salvin, Nov. Zool., 2, p. 3, 1895—Cajabamba, Succha, and Huamachuco, Peru (type in Salvin-Godman Collection, now in British Museum).

*Basileuterus nigro-cristatus nigrivertex* Hellmayr, Nov. Zool., 21, p. 161, 1914—northern Peru (crit.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 428, 1930—Cullcui, Marañón River, Peru (crit.).

*Basileuterus nigricristatus* (not *Trichas nigro-cristatus* Lafresnaye) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 223—near Cutervo; idem, l.c., 1880, p. 191—Cutervo; idem, Orn. Pér., 1, p. 477, 1884—Cutervo.

**Range.**—Humid Temperate zone of the upper Marañón Valley and its tributaries in northern Peru.

3: Peru (Cullcui, Marañón River, 3).

***Basileuterus nigro-cristatus euophrys* Sclater and Salvin.<sup>2</sup> BOLIVIAN BLACK-CRESTED WARBLER.**

are indistinguishable that the recognition of an Ecuadorian race is hardly justified. Birds from Mérida and Tachira resemble those from the east Colombian Andes, while skins from the north coast ranges of Venezuela (Silla de Caracas and Cerro del Avila) are again slightly smaller and a shade more greenish (less yellowish) on the upper parts. The wings of adult males: north coast mountains, 59–63; Mérida and Tachira, 58–63; eastern Andes of Colombia, 60–66; western Ecuador, 58–62.

**Additional material examined.**—Venezuela: Silla de Caracas, 11; Galipán, Cerro del Avila, 20; Sierra of Mérida (Valle, Conejos, Escorial), 8.—Eastern Andes of Colombia: 8.—Ecuador: Milligalli, 1; western slope of Pichincha, 1; Gualea, 3; Intac, 5; above Nanegal, 1; Lloa, 1; unspecified, 3.

<sup>1</sup>*Basileuterus nigro-cristatus nigrivertex* Salvin: Closely similar to *B. n. nigro-cristatus*, but with proportionately longer tail; back slightly brighter and of a more yellowish green; black cap generally less extensive; flanks and tibial feathers less strongly tinged with olive. Wing, 64–67, (female) 61–64; tail, 65–69, (female) 63–67; bill, 11  $\frac{1}{2}$ –12.

**Additional material examined.**—Peru: Cajabamba, 3; Huamachuco, 1; Succha, Huamachuco, 1; Tayabamba, 1.

<sup>2</sup>*Basileuterus nigro-cristatus euophrys* Sclater and Salvin: Similar in proportions to *B. n. nigrivertex*, but easily distinguished by the brighter yellow superciliaries being carried backward to above the posterior margin of the auriculars; by the greater extent of blackish on the sides of the head, not only the lores, but also the region surrounding the eye being of that color; by having only the anterior part of the crown dull black without a conspicuous occipital crest; much duller, citrine rather than warbler green dorsal surface, and decidedly paler yellow under parts. Wing, 67–70, (female) 64–66; tail, 63–67, (female) 61–63; bill, 11  $\frac{1}{2}$ –12.

**Material examined.**—Bolivia, Yungas of La Paz: Sandillani (alt. 2,500 meters), 8; Chaco, above La Paz, 1; Cocapata, 1; Unduavi (alt. 3,500 meters), 1.

*Basileuterus euophrys* Sclater and Salvin, Proc. Zool. Soc. Lond., 1876, p. 352—Tilotilo, Yungas of La Paz, Bolivia (type in Salvin-Godman Collection, now in British Museum); idem, l.c., 1879, p. 594—Tilotilo; Sharpe, Cat. Bds. Brit. Mus., 10, p. 382, 1885—Bolivia.

*Basileuterus nigrocristatus euophrys* Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 157 (in text), 1924—Sandillani, Cocapata, and Chaco, Bolivia (crit.).

*Range*.—Temperate zone of western Bolivia (Yungas of La Paz).

**\**Basileuterus luteoviridis luteoviridis* (Bonaparte). BONA-PARTE'S WARBLER.**

*Trichas luteoviridis* Bonaparte, Atti Sesta Riun. Sci. Ital. Milano, 1844, p. 405, 1845—"Santa Fé de Bogotá," Colombia (type in coll. of O. Antinori, present location unknown).

*Myiothlypis luteoviridis* Bonaparte, Consp. Gen. Av., 1, (2), p. 311, end of 1850—"Bogotá" (diag.); Sclater, Proc. Zool. Soc. Lond., 23, p. 143, 1855—"Bogotá."

*Chlorospingus zanthophrys* Sclater, Proc. Zool. Soc. Lond., 24, pp. 30, 93, 1856—"Bogotá," Colombia (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 90, 1862—"Bogotá."

*Basileuterus luteoviridis* Sclater and Salvin, Proc. Zool. Soc. Lond., 1875, pp. 234, 235—"Mérida," Venezuela; Sharpe, Cat. Bds. Brit. Mus., 10, p. 379, 1885—part, Colombia ("Bogotá"); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 8, 1899—Pun, Ecuador (crit.; spec. examined); Chapman, Bull. Amer. Mus. N. H., 36, p. 550, 1917—Almaguer, Fômeque, and Subia, Colombia.

*Basileuterus luteoviridis luteoviridis* Chapman, Bull. Amer. Mus. N. H., 55, p. 599, 1926—Zuna (Rio Upano), Tambillo (Rio Upano), and upper Sumaco, Ecuador; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 46, 1929—Venezuela to Ecuador (monog.).

*Range*.—Temperate zone of western Venezuela (Sierra of Mérida), the eastern Andes of Colombia, and eastern Ecuador (Pun; Mount Sumaco; Rio Upano).<sup>1</sup>

3: Colombia ("Bogotá," 1; Páramo de Tamá, 2).

***Basileuterus luteoviridis striaticeps* (Cabanis).<sup>2</sup> STRIPED-HEADED WARBLER.**

<sup>1</sup> A (female) specimen from Pun, Ecuador, has much paler yellow superciliaries and under parts, duller greenish upper surface, and very little dusky greenish admixture on the forehead, but these divergencies are probably due to immaturity, since both Chapman and Todd pronounce other Ecuadorian examples to be identical with Colombian ones. No Venezuelan material has been examined by the writer. Mr. Todd, however, records a specimen from the Temperate zone of the Mérida region (Culata). Two adult males from the central Andes (Almaguer) do not appreciably differ from east Andean birds.

*Additional material examined*.—Colombia: "Bogotá," 10; Almaguer, 2.—Ecuador: Pun, 1.

<sup>2</sup> *Basileuterus luteoviridis striaticeps* (Cabanis): Similar to *B. l. luteoviridis* and about the same size, but superciliaries much more conspicuous (wider as



*Myiothlypis striaticeps* Cabanis, Journ. Orn., 21, p. 316, 1873—Maraynioc, Dept. Junín, Peru (type in Berlin Museum).

*Myiothlypis luteoviridis* (not *Trichas luteoviridis* Bonaparte) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—part, Maraynioc, (?) Sillapata, and (?) Pumamarca, Peru.

*Basileuterus luteoviridis* Taczanowski, Orn. Pér., 1, p. 477, 1884—part, Maraynioc and (?) Sillapata; Sharpe, Cat. Bds. Brit. Mus., 10, p. 379, 1885—part, Peru.

*Basileuterus luteoviridis striaticeps* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—part, Maraynioc, Peru (crit.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 47, 1929—part, Junín (monog.).

*Range*.—Temperate zone of central Peru, in Dept. of Junín (Maraynioc, Rumicruz; (?) Sillapata, (?) Pumamarca).

### **Basileuterus luteoviridis superciliaris** Chapman.<sup>1</sup> URUBAMBA WARBLER.

*Basileuterus luteoviridis superciliaris* Chapman, Proc. Biol. Soc. Wash., 32, p. 265, 1919—above Torontoy, Urubamba Cañon, Dept. Cuzco, Peru (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 117, p. 106, 1921—above Torontoy and Cedrobamba, Peru.

*Basileuterus luteoviridis striaticeps* (not *Myiothlypis striaticeps* Cabanis) Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 47, 1929—part, above Torontoy and Cedrobamba (crit.).

*Range*.—Temperate zone of southeastern Peru, in Dept. of Cuzco (above Torontoy and Cedrobamba).

### **Basileuterus richardsoni** Chapman.<sup>2</sup> RICHARDSON'S WARBLER.

well as longer) and deeper in tone (lemon chrome to empire yellow instead of pinard to amber yellow). The upper parts are, as a rule, slightly darker, more of a brownish citrine hue, while the dusky loreal spot and orbital ring generally are more decidedly blackish. Wing, 73–76, (female) 66–67; tail, 69–72, (female) 61–63; bill, 12–13.

*Material examined*.—Peru, Dept. Junín: Maraynioc, 6; Rumicruz, 1.

<sup>1</sup> *Basileuterus luteoviridis superciliaris* Chapman: Similar to, and agreeing with, *B. l. striaticeps* in development of superciliaries, which are perhaps of an even deeper yellow tone; but dorsal surface and external margins to wing feathers decidedly more brownish (between citrine and orange citrine), and without any blackish on the sides of the head, the loreal spot as well as the orbital region being brownish citrine like the back instead of dark olive gray or iron gray. Wing (male), 70; tail, 69–70.

Although disregarded by Mr. Todd, this form seems to be recognizable by the characters given above, judged from two specimens available for comparison.

*Material examined*.—Peru: above Torontoy, 2.

<sup>2</sup> *Basileuterus richardsoni* Chapman: Similar in size to *B. l. luteoviridis*, but upper parts much duller (dull citrine to olive citrine instead of dark citrine); superciliaries cream-colored, sometimes passing into white anteriorly (instead of bright yellow); under surface much paler, amber yellow (instead of lemon chrome to empire yellow), the chin largely white; the sides of breast and abdomen less

*Basileuterus richardsoni* Chapman, Bull. Amer. Mus. N. H., 31, p. 160, 1912—Andes west of Popayan, Cauca, Colombia (type in the American Museum of Natural History, New York); idem, l.c., 36, p. 550, 1917—Andes west of Popayan and Laguneta, central Andes, Colombia; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 48, 1929—central and western Andes of Colombia (monog.).

**Range.**—Temperate zone of the western Andes and west slope of the central Andes of Colombia.

***Basileuterus signatus signatus* Berlepsch and Stolzmann.<sup>1</sup>**  
**SHORT-WINGED WARBLER.**

*Basileuterus signatus* Berlepsch and Stolzmann, Ornith., 13, p. 74, Sept., 1906—part, Idma, Urubamba Valley, Peru (type in Branicki Museum, now in Warsaw Museum, examined).<sup>2</sup>

*Basileuterus luteoviridis signatus* Chapman, Proc. Biol. Soc. Wash., 32, p. 265, (in text), 1919—part, San Miguel Bridge and Torontoy, Peru; idem, Bull.

greenish, ecru olive rather than pyrite yellow or citrine. Wing, 72, (female) 65–68; tail, 62, (female) 57; bill, 11.

A species of doubtful affinities. In size, *B. richardsoni* agrees well with *B. luteoviridis*, and like the various races of that group inhabits the Temperate zone. By its dull greenish upper parts and yellowish feet it recalls *B. s. signatus*, but differs by larger size, cream-colored superciliaries, and much paler yellow under parts. According to Chapman, the range of *B. richardsoni* overlaps that of *B. l. luteoviridis* in the central Andes of Colombia. Unfortunately, the Laguneta specimen, which would seem to approach the latter "species" by brighter yellow ventral surface and yellowish-tinged superciliaries, cannot now be found. I must confess I am not quite convinced of the distinctness of *B. richardsoni*, though I cannot offer any plausible explanation of its peculiarities. The pale, dull coloration of the specimens that I have been able to examine cannot be solely due to the worn condition of their plumage, yet I hesitate to admit the probability that two so closely allied "species" could coexist in the same mountain range. More material from the western and central Andes is badly needed for the solution of this puzzling problem.

**Material examined.**—Colombia: Andes west of Popayan, 3.

<sup>1</sup>*Basileuterus signatus signatus* Berlepsch and Stolzmann: Similar to *B. luteoviridis straticiceps*, but much smaller; upper parts decidedly duller (olive citrine to dark citrine); yellow superciliaries narrower and shorter (not reaching beyond the eye); dusky loreal spot less conspicuous; no blackish orbital ring; yellow of under parts generally paler; feet yellowish flesh color instead of horn brown. Wing, (male) 62–65, (female) 57–61; tail, 61–65, (female) 55–59; bill, 10½–12.

In spite of its superficial resemblance, this bird, as has been pointed out by Todd, appears to be specifically distinct from *B. luteoviridis*. While chiefly restricted to lower altitudes than the races of *B. luteoviridis*, which are found exclusively in the Temperate zone, we have examined typical examples of both *B. s. signatus* and *B. l. straticiceps* collected by H. Watkins in March, 1922, at Rumicruz (alt. 9,700 ft.), Dept. Junín. An adult male from Garita del Sol, Vitoc—identified as *straticiceps* by Berlepsch and Stolzmann—also proves to pertain to *B. s. signatus*.

**Material examined.**—Peru: Rumicruz, Junín, 2; Garita del Sol, Vitoc (alt. 5,740 ft.), 1; Idma, above Santa Ana, 1 (the type); San Miguel Bridge, Urubamba, 5; Torontoy (alt. 7,800 ft.), 2.

<sup>2</sup>Sztoleman and Domaniewski (Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 165, 1927) erroneously list a male from Chulumani, Bolivia, as type of *B. signatus*.

U. S. Nat. Mus., 117, p. 107, 1921—San Miguel Bridge and Torontoy (crit.).

*Basileuterus signatus signatus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 44, 1929—Peru from Junín to Urubamba (monog.).<sup>1</sup>

*Myiothlypis luteoviridis* (not of Bonaparte) Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—part, Ninabamba, (?) Sillapata, and (?) Pumamarca, Peru.

*Basileuterus luteoviridis* Taczanowski, Orn. Pér., 1, p. 477, 1884—part, Ninabamba and (?) Sillapata, Peru.

*Basileuterus luteoviridis striaticeps* (not *Myiothlypis striaticeps* Cabanis) Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—part, Garita del Sol, Vitoc, Peru (spec. in Berlepsch Collection examined).

*Myiothlypis striaticeps* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 5 (in text), 1920—Garita del Sol, Peru (crit.).

**Range.**—Subtropical zone of Peru, from Dept. of Junín to the Urubamba Valley.

### ***Basileuterus signatus flavovirens* Todd.<sup>2</sup> YELLOW-GREEN WARBLER.**

*Basileuterus signatus flavovirens* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 45, 1929—Incachaca, Dept. Cochabamba, Bolivia (type in Carnegie Museum, Pittsburgh).

*Basileuterus leuteoviridis* (not *Trichas luteoviridis* Bonaparte) Allen, Bull. Amer. Mus. N. H., 2, p. 79, 1889—Yungas, Bolivia.

[*Basileuterus*] *luteoviridis* Chapman, Bull. Amer. Mus. N. H., 31, p. 160 (in text), 1912—part, Yungas, Bolivia, and Inca Mine, Peru (crit.).

*Basileuterus signatus* Berlepsch and Stolzmann, Orn. 13, p. 74, 1906—part, western Yungas of Bolivia.

*Basileuterus luteoviridis signatus* (not *B. signatus* Berlepsch and Stolzmann) Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 5, 1920—Chuhuasi, Dept. Puno, Peru (crit.); Chapman, Bull. U. S. Nat. Mus., 117, p. 107 (in text), 1921—Bolivia (crit.).

<sup>1</sup> The two specimens from Inca Mine [=Santo Domingo] prove to be referable to *B. s. flavovirens*.

<sup>2</sup> *Basileuterus signatus flavovirens* Todd: Very similar to *B. s. signatus*, but upper parts somewhat brighter (between warbler green and citrine); forehead distinctly dusky and a similar line bordering the yellow superciliaries; the latter as well as the under parts, as a rule, deeper yellow (between empire yellow and lemon chrome). Wing, 60–63, (female) 56–58; tail, 56–61, (female) 54–56; bill, 10½–12.

Although recognizable in a series, the characters of this form are occasionally obliterated by individual variation. Certain specimens have the dusky suffusion on the forecrown hardly more pronounced than typical *signatus*, while, on the other side, the superciliaries and under parts in various examples of the latter are just as deeply colored as in *flavovirens*. Birds from the Marcapata region of extreme southeastern Peru agree with the Bolivian ones.

**Material examined.**—Peru, Dept. Puno: Marcapata Valley (alt. 6,000 to 9,000 ft.), 4; Chuhuasi (alt. 7,000 ft.), 1; Oceneque, near Limbani, 1; Santo Domingo (alt. 6,000 ft.), 2; Inca Mine [=Santo Domingo], 2.—Bolivia: Dept. La Paz: Chulumani, 3; Cocapata, 4.

*Range*.—Subtropical zone of extreme southeastern Peru, in Dept. of Puno (Marcapata; Santo Domingo; Oceneque near Limbani; Chuhuasi), and Bolivia (depts. of La Paz and Cochabamba).

**\**Basileuterus flaveolus* (Baird). BAIRD'S WARBLER.**

*Myiothlypis flaveolus* Baird, Rev. Amer. Bds., 1, p. 252 (footnote), May, 1865—"Paraguay," probably Rio Paraguay (type in U. S. National Museum); Pelzeln, Orn. Bras., 2, p. 72, 1868—São Paulo (Rio das Pedras; Porto do Rio Paraná=Rio Grande), Goyaz, and [Villa Bella de] Matto Grosso (spec. in Vienna Museum examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 444—Porto de Paraná (ex Pelzeln); Naumburg, Bull. Amer. Mus. N. H., 60, p. 339, 1930—Paraguay (Fort Wheeler) and Matto Grosso (Urucúm, Utiarity).

*Basileuterus flaveolus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 380, 1885—Bahia and Goyaz; Allen, Bull. Amer. Mus. N. H., 3, p. 345, 1891—Chapada, Matto Grosso (plumages, eggs descr.); Ihering, Rev. Mus. Paul., 3, p. 134, 1898—São Paulo (ex Pelzeln); Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 3, 1900—Urucúm, Matto Grosso; Robinson and Richmond, Proc. U. S. Nat. Mus., 24, p. 177, 1901—La Guaira, Venezuela; Ihering, Cat. Faun. Braz., 1, p. 333, 1907—São Paulo (Rincão, Avanhanda) and Bahia (range); Hellmayr, Nov. Zool., 15, p. 19, 1908—Rio Araguaya, Goyaz, and Maranhão (range, crit.); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 78, 1910—Bahia (frontier mountains near Santa Rita) and Piahy (Lagôa Missão and Parnaguá); Grant, Ibis, 1911, p. 89—Sapatero Cué, Paraguay; Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 47, 1912—Las Quiguas, Carabobo, Venezuela (crit.); Ménégau, Rev. Franc. d'Orn., 5, p. 85, 1917—Caceres, Matto Grosso; Hellmayr, Nov. Zool., 32, p. 181, 1925—Chiquitos, Bolivia (crit.); Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará; Wetmore, Bull. U. S. Nat. Mus., 133, p. 370, 1926—west of Puerto Pinasco, Paraguay; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 42, 1929 (monog.); Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 258, 1929—Maranhão (Barra do Corda, Tranqueira, and Fazenda Inhuma, Alto Parnahyba), Piahy (Ibiapaba, Arára), and Ceará (Juá, near Iguatú); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 311, 1930—eastern Bolivia (San José, La Carapacito, and La Crecencia, Dept. Santa Cruz).

*Muscicapa bivittata* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 51, 1837—part, Chiquitos, Bolivia (descr. of "female"; spec. in Paris Museum examined).

*Range*.—Interior of Brazil from Maranhão, Piahy, and Ceará south through Bahia and Goyaz to western Minas Geraes, northern São Paulo, and Matto Grosso; eastern Bolivia (Chiquitos); Paraguay; and northern coast region of Venezuela, in Dept. Federal, and in states of Carabobo and Lara.<sup>1</sup>

<sup>1</sup> The reappearance of this species in northern Venezuela is very singular. Birds from that part of its range differ nowise from Brazilian and Bolivian specimens, so far as I can see. I fully concur with Mr. Zimmer's view (Field Mus.

19: Brazil (Barra do Corda, Maranhão, 4; Tranqueira, Maranhão, 1; Fazenda Inhuma, Alto Parnahyba, Maranhão, 2; Ibiapaba, Piauí, 3; Arára, Piauí, 1; Juá, near Iguatú, Ceará, 1; Santo Amaro, Bahia, 1; Chapada, Matto Grosso, 2; Urucúm, Matto Grosso, 2); Venezuela (Macuto, Caracas, 2).

**Basileuterus griseiceps** Sclater and Salvin.<sup>1</sup> GRAY-HEADED WARBLER.

*Basileuterus griseiceps* Sclater and Salvin, Proc. Zool. Soc. Lond., 1868, p. 170 —“Venezuela in sylvis Caripensibus”=Caripé, Sucre, Venezuela (type in coll. of P. L. Sclater, now in British Museum, examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 399, 1885—Venezuela; Hellmayr, Nov. Zool., 20, p. 235, 1913—Venezuela (crit.); Chapman, Amer. Mus. Nov., 191, p. 11, 1925—Carapas, La Trinidad, and Turumiquire, Venezuela; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 29, 1929—eastern coast mountains of Venezuela (monog.).

*Chlorospingus (Hemispingus) canipileus* Chapman, Bull. Amer. Mus. N. H., 12, p. 153, Aug., 1899—Los Palmales, Venezuela (type in the American Museum of Natural History, New York, examined); Hellmayr, Nov. Zool., 20, p. 235, 1913 (crit.).

*Range*.—Subtropical zone of northeastern Venezuela, in State of Sucre.

**Basileuterus leucophrys** Pelzel.<sup>2</sup> PELZELN'S WHITE-BROWED WARBLER.

Nat. Hist., Zool. Ser., 17, p. 429, 1930) that *M. flaveolus* cannot be separated generically from *Basileuterus*, in which it was also placed by Mr. Todd, although this author recognized *Myiothlypis* as distinct.

*Additional material examined*.—Brazil: Parnaguá, Piauí, 1; Lagôa Missão, near Parnaguá, Piauí, 1; Bahia, 10; mountain range north of Santa Rita, Bahia, 1; Rio Araguaya, Goyaz, 1; Goyaz City, 2; Agua Suja, near Bagagem, Minas Geraes, 2; Rio Paraná, São Paulo, 2; Rio das Pedras, São Paulo, 1; Villa Bella de Matto Grosso, Matto Grosso, 1.—Bolivia: Chiquitos, 1; San José de Chiquitos, 1; La Carapacito, Dept. Santa Cruz, 1.

<sup>1</sup>*Basileuterus griseiceps* Sclater and Salvin is most nearly related to *B. leucoblepharus*, which it resembles in dark gray pileum, markings on sides of head, and pale brown legs, but differs by deep yellow, instead of mainly white, under parts. Wing, 63–65, (female) 60–61; tail, 60–62, (female) 58; bill, 12–13.

*Material examined*.—Venezuela: Caripé, 1 (the type); Los Palmales, 3.

<sup>2</sup>*Basileuterus leucophrys* Pelzel: Another near ally of *B. leucoblepharus*, but much larger; pileum darker (dark neutral gray) and nearly uniform; back distinctly brownish, dark citrine instead of bright olive green; wings and tail still darker, medal bronze instead of dull olive green; white superciliaries much wider and carried backward to above the posterior margin of the auriculars; cheeks white (at best minutely dotted with dusky) instead of mainly dark gray; the flanks pale brownish; the under tail coverts warm buff instead of citron yellow. Wing, 75–76, (female) 68–70; tail, 73–75, (female) 67–69; bill, 13.

*Material examined*.—Matto Grosso: Rio Manso, 2 (males); Aldea Queimada, 2 (females).—São Paulo: Porto do Rio Grande, 1 (female).

*Basileuterus leucophrys* Pelzeln, Orn. Bras., 2, pp. 72, 137, 1868—Porto do Rio Paraná [=Rio Grande], São Paulo, and Engenho do Capitão Correio on the Rio Manso, Matto Grosso (type in Vienna Museum examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 400, 1885 (ex Pelzeln); Allen, Bull. Amer. Mus. N. H., 3, p. 345, 1891—Chapada, Matto Grosso; Ihering, Cat. Faun. Braz., 1, p. 334, 1907 (range); Hellmayr, Nov. Zool., 28, p. 244, 1921 (crit., range); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 26, 1929 (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 341, pl. 17, 1930—Aldea Queimada, Matto Grosso.

*Range*.—Interior of Brazil, from Matto Grosso (Aldea Queimada; Chapada; Rio Manso) south to northeastern São Paulo (Porto do Rio Grande).

**\**Basileuterus leucoblepharus* (Vieillot). WHITE-BROWED  
WARBLER.**

*Sylvia leucoblephara*<sup>1</sup> Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 206, 1817—no locality or source indicated, but, according to Vieillot (Tabl. Enc. Meth., Orn., livr. 89, p. 459, 1820), it is based on "El Contramaestre" Azara, No. 153, Paraguay; Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 20, 1837—Corrientes, Argentina (spec. in Paris Museum examined); d'Orbigny, Voy. Amér. Mérid., Ois., p. 216, pl. 12, fig. 2, 1838—Corrientes.

*Trichas superciliosus* Swainson, Anim. Menag., p. 295, Dec. 31, 1837—Brazil (type in coll. of W. Swainson, now in University Museum, Cambridge, Engl., examined).

*Trichas leucoblephara* Burmeister, Syst. Uebers. Th. Bras., 3, p. 114, 1856—Nova Friburgo, Rio de Janeiro (habits).

*Basileuterus leucoblepharus* Sclater, Proc. Zool. Soc. Lond., 1865, p. 285—Brazil, Paraguay, and "Bolivia int.," errore (diag.); Pelzeln, Orn. Bras., 2, p. 72, 1868—Ypanema (São Paulo) and Curytiba (Paraná); idem, Nunq. Otios., 2, p. 291, 1874—Nova Friburgo; Berlepsch and Ihering, Zeits. Ges. Orn., 2, p. 115, 1885—Picade Tocana and Arroio Grande, Rio Grande do Sul; Sharpe, Cat. Bds. Brit. Mus., 10, p. 400, 1885—Brazil (monog.); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Mundo Novo, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 135, 1899—Ypiranga, São Paulo; idem, l.c., 4, pp. 152, 203, 1900—Nova Friburgo, Rio, and Itatiba, São Paulo (nest and egg descr.); idem, Cat. Faun. Braz., 1, p. 333, 1907—São Paulo (Ypiranga, Campos do Jordão, Campinas, Itararé), Minas Geraes (Itatiaya), and Argentina (Ancones); Lillo, Apunt. Hist. Nat., 1, p. 43, 1909—Mocoví, Santa Fé; Lüderwaldt, Zool. Jahrb. (Syst.), 27, p. 356, 1909—Campo Itatiaya; Dabbene, Anal.

<sup>1</sup> In all of the six copies of the "Nouveau Dictionnaire" consulted the specific name is spelled *leucoblephara*, while, according to Wetmore (Bull. U. S. Nat. Mus., 133, p. 369, 1926), it reads *leucoblepharides* in the set seen by him. This discrepancy seems to indicate the existence of two different versions as in the case of *Meleagris silvestris* Vieillot (l.c., 9, p. 447, 1817), later replaced by *Meleagris fera* on a substitute leaf.

Mus. Nac. Buenos Aires, (3), 11, p. 369, 1910—San Vicente and Mocoví, Santa Fé; Chubb, Ibis, 1910, p. 615—Sapucay, Paraguay; Bertoni, Anal. Soc. Cient. Arg., 75, p. 97, 1913—Chaco (?) and Misiones; Dabbene, Bol. Soc. Physis, 1, p. 354, 1914 (range in Argentina); Holt, Bull. Amer. Mus. N. H., 57, p. 314, 1928—Macieiras and Alto Itatiaya, São Paulo.

*Basileuterus leucoblepharum* Baird, Rev. Amer. Bds., 1, pp. 242, 244, 1865—Paraguay (crit.).

*Basileuterus superciliosus* Baird, Rev. Amer. Bds., 1, p. 243, 1865—Brazil (crit.).

*Basileuterus leucoblepharus calus* Oberholser, Proc. Biol. Soc. Wash., 14, p. 188, 1901—Sapucay, Paraguay (type in U. S. National Museum); idem, Proc. U. S. Nat. Mus., 25, p. 141, 1902—Sapucay; Bertoni, Faun. Parag., p. 60, 1914—Alto Paraná, Paraguay.

*Basileuterus leucoblepharus leucoblepharus* Hartert and Venturi, Nov. Zool., 16, p. 166, 1909—Mocoví, San Vicente, and Ocampo, Santa Fé; Dabbene, Anal. Mus. Nac. Buenos Aires, 23, p. 348, 1912—Villa Rica, Paraguay (crit.); Hellmayr, Nov. Zool., 28, p. 244, 1921—Chaco (crit., range); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 185, 1926—Paraná (Fazenda Concordia, Fazenda Durski, Vermelho, Candido Abreu, and Porto Mendes); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 310, 1930—Argentina, Formosa (San José, Tapiokiolé, Yuncá Viejo) (crit.).

*Basileuterus leucoblepharus superciliosus* Hellmayr, Nov. Zool., 28, p. 244, 1921—Rio de Janeiro to Paraná (crit.).

*Basileuterus leucoblepharides leucoblepharides* Wetmore, Bull. U. S. Nat. Mus., 133, p. 369, 1926—Chaco (Resistencia, Las Palmas), Formosa (Riachó Pilaga), and Uruguay (San Vicente, Lazcano, Rio Negro) (habits); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 27, 1929 (monog.).

**Range.**—Southeastern Brazil, from Rio de Janeiro and São Paulo south to Rio Grande do Sul; Uruguay; Paraguay; northeastern Argentina, in states of Santa Fé, Corrientes, and Misiones, and in territories of Chaco and Formosa.<sup>1</sup>

8: Brazil (Rio, Therezopolis, 2; São Paulo, 1); Uruguay (Quebrada de los Cuervos, 3); Argentina (Puerto Segundo, Misiones, 2).

<sup>1</sup> Examination of much additional material leads me to concur with Mr. Todd in suppressing the eastern race, *B. l. superciliosus*, which I at one time proposed to separate on account of smaller size and certain color differences. Not one of the latter holds in the large series now available, and while there is a certain tendency to greater dimensions in birds from Argentina, Paraguay, and Rio Grande do Sul, the variation is altogether too insignificant to be expressed in nomenclature. The length of the wing in adult males from these districts ranges from 64 to 70, whereas in those from Rio de Janeiro to Paraná it varies from 61 to 67.

**Additional material examined.**—Argentina: Chaco of Santa Fé, 3; Formosa, 3; Corrientes, 1.—Paraguay: Sapucay, 2.—Brazil: Rio Grande do Sul, 5; Roça Nova, Serra do Mar, Paraná, 2; Ypanema, São Paulo, 12; Victoria, São Paulo, 4; Fazenda Cayoá, Rio Parapanema, São Paulo, 3; Nova Friburgo, Rio de Janeiro, 1; unspecified, 2.

**\**Basileuterus bivittatus bivittatus* (Lafresnaye and d'Orbigny).  
TWO-BANDED WARBLER.**

*Muscicapa bivittata* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 51, 1837—part, Yungas, Bolivia (descr. of male; type in Paris Museum examined).

*Muscicapara bivittata* d'Orbigny, Voy. Amér. Mérid., Ois., p. 324, 1840—Carcuata, Yungas of La Paz, Bolivia (habits).

*Trichas bivittatus* Lafresnaye, Rev. Zool., 3, p. 231, 1840—Yungas (but not Chiquitos), Bolivia (diag.).

*Basileuterus bivittatus* (sic) Allen, Bull. Mus. Comp. Zool., 3, p. 353, 1876—"Coroico, Bolivia."<sup>1</sup>

*Basileuterus bivittatus* Selater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—part, Carcuata, Yungas (ex d'Orbigny); Sharpe, Cat. Bds. Brit. Mus., 10, p. 391, 1885—part, Bolivia (Simacu, Consata); Salvadori, Boll. Mus. Zool. Torino, 12, No. 292, p. 4, 1897—San Lorenzo, Jujuy; Bruch, Rev. Mus. La Plata, 11, p. 257, 1904—Orán, Salta; Dabbene, Anal. Mus. Nac. Buenos Aires, 18, p. 369, 1910—Salta (Orán) and Jujuy (San Lorenzo); idem, Bol. Soc. Physis, 1, p. 354, 1914—Salta (Orán, Rio Bermejo) and Jujuy (Ledesma, San Lorenzo); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 49, 1929—southeastern Peru to Argentina (monog.).

*Basileuterus bivittatus* subsp. (?) Berlepsch and Stolzmann, Ornith., 13, p. 106, 1906—Huaynapata, Marcapata, Peru (crit.; spec. examined).

*Basileuterus bivittatus bivittatus* Hartert and Venturi, Nov. Zool., 16, p. 167, 1909—Ledesma, Jujuy, and Rio Bermejo, Salta; Dinelli, El Hornero, 1, p. 61, 1918—Cerro south of Tucumán (nest and eggs); Hellmayr, Nov. Zool., 32, p. 181, 1925—Bolivia and Argentina (crit., note on type); Laubmann, Wissens. Erg. Deuts. Gran Chaco Exp., Vögel, p. 312, 1930—Villa Montes, Tarija, Bolivia.

*Basileuterus diachlorus* (not of Cabanis) Selater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—Simacu and Consata, Bolivia.

**Range.**—Tropical zone of northwestern Argentina (in provinces of Tucumán, Salta, and Jujuy) through Bolivia (depts. of Tarija, Cochabamba, and La Paz) to southeastern Peru (Rio Inambari and Huaynapata, Dept. Puno; Callanga, Dept. Cuzco).<sup>2</sup>

2: Argentina (Ledesma, Jujuy, 2).

<sup>1</sup> "Coroico," said to be "a few miles southwest of Lake Titicaca"—an impossible locality for a Tropical zone species—refers evidently to the place of that name in the Yungas of La Paz.

<sup>2</sup> Birds from Argentina are identical with the Bolivian ones, varying within the same limits as to the tone of the upper and under parts and the amount of yellow in the median coronal stripe. There is at least some yellow at the base of the crown feathers, while in others this basal area is quite extensive, being followed by a dull orange (mars yellow) zone and tipped with dull citrine.

Four specimens from southeastern Peru (Rio Inambari, Callanga, Huaynapata) are slightly aberrant. The pale yellow supraloral streak is shorter, ending, as it does, at the anterior angle instead of reaching to above the middle of the eye; the lateral crown stripes are more deeply black, in particular posteriorly, with



**Basileuterus bivittatus roraimae** Sharpe.<sup>1</sup> RORAIMA  
WARBLER.

*Basileuterus roraimae* Sharpe, Cat. Bds. Brit. Mus., 10, p. 392, 1885—Roraima and Merumé Mountains, British Guiana (type from Roraima in British Museum); Salvin, Ibis, 1885, p. 203—same localities; idem, Ibis, 1886, p. 500—Mount Twék-quay; Beebe, Zoologica (N.Y.), 2, p. 232, 1919—Bartica Grove (?); Chubb, Bds. Brit. Guiana, 2, p. 416, pl. 6, fig. 1, 1921—Roraima and Merumé Mountains; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 53, 1929—Roraima (monog.).

*Basileuterus bivittatus roraimae* Hellmayr, Nov. Zool., 32, p. 181, 1925—mountains of British Guiana; Chapman, Bull. Amer. Mus. N. H., 63, p. 117, 1931—Roraima (Paulo, Arabupu) and Duida (Agüita, Valley Head), Venezuela.

*Range*.—Subtropical zone of British Guiana (Mounts Roraima, Merumé, and Twék-quay) and Venezuela (Mount Duida).<sup>2</sup>

**Basileuterus chrysogaster chrysogaster** (Tschudi).<sup>3</sup> GOLDEN-  
BELLIED WARBLER.

*Setophaga chrysogaster* Tschudi, Arch. Naturg., 10, (1), p. 276, 1844—Peru (type in Neuchâtel Museum examined); idem, Unters. Faun. Peru.,

fewer, if any, greenish edges; the upper surface is on average darker, approaching dark citrine. The orange subapical portion of the median coronal stripe is deeper in tone, xanthine orange rather than mars yellow, and one specimen, a male from Huaynapata, has no trace of yellow at the base (very much as in *B. b. roraimae*). Mr. Todd has referred this bird as well as another male from Callanga to *B. c. chrysogaster*, but in view of their large size (wing, 66½, 68; tail, 59, 61), greenish postocular stripe, light yellow under parts, and other characters, I cannot possibly agree to this identification. While more adequate series are required to ascertain whether these Peruvian birds are separable or not, their pertinence to *B. bivittatus* appears to me beyond question.

*Additional material examined*.—Argentina: Ledesma, Jujuy, 11; Rio Bermejo, Salta, 1.—Bolivia: Villa Montes, Tarija, 1; Samaipata, 1; Santa Cruz de la Sierra, 2; Quebrada Onda, Cochabamba, 1; Carcuata, Yungas of La Paz, 1 (the type); Songo, Yungas of La Paz, 4; Consata, 1.—Peru, Dept. Cuzco: Rio Inambari, 2; Callanga, 1; Huaynapata, Marcapata, 1.

<sup>1</sup>*Basileuterus bivittatus roraimae* Sharpe: Similar to *B. b. bivittatus* and about the same size; but back and outer margins of wing and tail of a slightly darker, more brownish hue (dark citrine rather than dull warbler green to citrine); the median coronal stripe wholly xanthine orange or orange rufous without any yellow at the base (though similarly tipped with dull citrine); the lateral crown stripes deeper black without any dull citrine tipping; the under parts brighter, lemon chrome rather than empire yellow; the bill paler, the maxilla horn brown, the mandible brownish white. Wing, 68–72, (female) 63–65; tail, 61–65, (female) 56–58; bill, 11–12.

*Material examined*.—British Guiana: Roraima, 12.

<sup>2</sup>Beebe's record from Bartica Grove is undoubtedly erroneous, this bird being strictly confined to the Subtropical zone.

<sup>3</sup>*Basileuterus chrysogaster chrysogaster* (Tschudi): Similar to *B. b. bivittatus*, but markedly smaller; back and external edges to wings fresher, less olivaceous green; tertials and rectrices dusky exteriorly edged with green, instead of entirely dull greenish; the median coronal stripe less extensive, confined to the forecrown, and (aside from the dull citrine tipping) uniform dull orange (mars yellow) with

Aves, p. 192, 1846—sugar plantation San Pedro, near Lurin, coast of Peru, given as type locality (p. 193), errore; we suggest Chanchamayo Valley, Dept. Junín.

*Basileuterus diachlorus* Cabanis, Journ. Orn., 21, p. 316, 1873—Amable Maria, Dept. Junín, Peru (type, adult male, in Berlin Museum);<sup>1</sup> Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Monterico, Dept. Ayacucho, and Amable Maria.

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Taczanowski, Orn. Pér., 1, p. 473, 1884—Monterico and Amable Maria, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 391, 1885—part, Peru.

*Basileuterus bivittatus chrysogaster* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—La Merced, Chanchamayo, Peru; Berlepsch and Hellmayr, Journ. Orn., 53, p. 6, 1905—Peru (note on type); Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 6, 1920—Yahuar Mayo, Dept. Puno (crit.); idem, Nov. Zool., 32, p. 181, 1925—central Peru (crit.).

*Basileuterus chrysogaster chrysogaster* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 51, 1929—Peru (excl. spec. from Huaynapata, Callanga, and "Lake Titicaca"; monog.).

**Range.**—Tropical zone of eastern Peru, in depts. of Junín (Tulumayo, Amable Maria, La Merced), Ayacucho (Monterico), Cuzco (Astillero, La Pampa), and Puno (Yahuar Mayo).

**\**Basileuterus chrysogaster chlorophrys* Berlepsch.<sup>2</sup> GREEN-BROWED WARBLER.**

mere traces of yellow at the base; the lateral crown stripes generally duller, less blackish; the supraloral streak continued as a narrow yellow supercilium to the sides of the neck; auriculars darker green; the under parts brighter, deep strontian yellow. Wing, 60–63, (female) 55–59; tail, 52–54, (female) 49–52; bill, 10–11.

It is with considerable reluctance that I follow Mr. Todd in according this form specific rank, and if I do so, it is merely because *B. c. chrysogaster* and *B. b. bivittatus* have both been found in the same section of the Tropical zone of southeastern Peru. I am, however, not yet convinced that they actually breed side by side in that region, and would recommend the problem to further field work. The total number of specimens of *B. c. chrysogaster* preserved in collections, moreover, is very small, and it is hardly possible at the present time to indicate, with any degree of finality, the limits of its variation. The type of *S. chrysogaster*, although in exceedingly poor condition, is undoubtedly identical with a topotypical example of *B. diachlorus*.

**Material examined.**—Peru: Tulumayo (alt. 4,000 ft.), Junín, 4; La Merced (alt. 2,600 ft.), Chanchamayo, Junín, 2; Amable Maria, Junín, 2; Monterico, Ayacucho, 2; Astillero, Cuzco, 1; La Pampa, Cuzco, 1; Yahuar Mayo, Puno, 1; unspecified, 1 (the type).

<sup>1</sup> The unsexed specimen from Amable Maria, listed as type by Sztolzman and Domaniewski (Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 166, 1927), is at best a paratype.

<sup>2</sup> *Basileuterus chrysogaster chlorophrys* Berlepsch: Similar to *B. c. chrysogaster*, but more intensely colored throughout, the upper parts being darker, more brownish green (between citrine and dark citrine instead of warbler green to olive green), the lateral crown stripes more solidly black without any dull citrine marginal edges, and the under surface duller yellow with the greenish suffusion on the sides more extensive and encroaching on the chest. Besides, the supraloral and super-

*Basileuterus bivittatus chlorophrys* Berlepsch, Ornith., 14, p. 347, Feb., 1907—"Quito," Ecuador<sup>1</sup> (type in coll. of H. von Berlepsch, now in Frankfurt Museum, examined); Ménégau, Miss. Serv. Géogr. Armée Mes. Arc. Mérid. Equat., 9, p. B. 73, 1911—Ayuriquin, near Santo Domingo, Ecuador; Chapman, Bull. Amer. Mus. N. H., 36, p. 552, 1917—Buenavista, Nariño, Colombia; Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 7 (in text), 1920—Ecuador (Paramba, Cachi, and Lita; crit.); idem, Nov. Zool., 32, p. 181, 1925—western Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 601, 1926—Chimbo, Ecuador (crit.).

*Basileuterus chrysogaster chlorophrys* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 52, 1929—southwestern Colombia and western Ecuador (monog.).

**Range.**—Tropical zone of western Ecuador (from Chimbo northwards) and southwestern Colombia (Buenavista, Nariño).

1: Ecuador (Lita, Prov. Imbabura, 1).

**\**Basileuterus basilicus* (Todd).<sup>2</sup> SANTA MARTA WARBLER.**

*Hemispingus basilicus* Todd, Proc. Biol. Soc. Wash., 26, p. 170, 1913—San Lorenzo, Santa Marta, Colombia (type in Carnegie Museum, Pittsburgh); idem and Carriker, Ann. Carnegie Mus., 14, p. 446, pl. 6, 1922—San Lorenzo, Macotama, and Páramo de Mamarongo, Colombia (crit., habits).

*Basileuterus basilicus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 78, 1929—same localities (crit.).

ciliary stripe is by no means yellow, but greenish (citrine) like the auriculars. The median coronal patch, of the same restricted extent as in *B. c. chrysogaster*, shows, independent of sex, two color types, being either wholly dull orange (mars yellow) down to the base as in *B. c. chrysogaster*, or pure golden yellow, in either case with dull citrine tips to the feathers. The yellow-crowned variety, however, is much less common, since out of a total of sixteen only four specimens pertain to it. Wing, 62–66, (female) 58–62; tail, 51–56, (female) 48–51; bill, 10–11.

While differing from both *B. c. chrysogaster* and *B. b. bivittatus* by the dimorphism in the coloration of the coronal stripe, this form reverts to the characters of the latter in having the postocular part of the superciliary region greenish, and throws once more serious doubts on the specific distinctness of these groups.

**Additional material examined.**—Ecuador, Prov. Imbabura: Lita (alt. 3,000 ft.), 5; Cachi, (alt. 3,200 ft.), 1; Paramba (alt. 3,500 ft.), 9; "Quito," 1 (the type).

<sup>1</sup> The type is a trade skin of the ordinary "Quito" preparation. Mr. Todd (l.c., p. 53) suggested Lita, Prov. Imbabura, as type locality, but the region above Santo Domingo de los Coronados, frequently visited by native hunters, is a more likely place of origin.

<sup>2</sup> *Basileuterus basilicus* (Todd), while resembling *B. tristriatus* in general style of coloration, differs so strikingly by proportionately much longer tail, larger bill, and much longer tarsi and toes that I am inclined to accord it specific rank. The upper parts are much the same as in *B. t. tristriatus*, though the back is of a brighter, fresher green (citrine rather than dark citrine), and the median coronal stripe is grayish white, anteriorly only suffused or edged with pale (citron) yellow; the superciliaries, the freckling below the eye, and the margin to the black auricular patch are white instead of buffy; the throat clearer white; the remainder of the under surface much deeper yellow (lemon chrome). The buffy superciliaries and markings on the sides of the head in the immature plumage betray, however, the close genetic relationship to the *B. tristriatus* group. Wing (males), 67–69; tail, 64–67; tarsi, 22–24; bill, 12–13.

*Range*.—Temperate zone of the Santa Marta Mountains, Colombia.

2: Colombia (La Cumbre, Santa Marta, 1; San Lorenzo, 1).

**\**Basileuterus tristriatus melanotis* Lawrence. BLACK-EARED WARBLER.**

*Basileuterus melanotis* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 95, 1868—Cervántes and Birris, Costa Rica (type, from Cervántes, in U. S. National Museum); Frantz, Journ. Orn., 17, p. 294, 1869—Costa Rica; Salvin, Ibis, 1869, p. 313—Costa Rica (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 386, 1885—part, spec. a, Costa Rica; Bangs, Proc. New Engl. Zool. Cl., 3, p. 60, 1902—Boquete and Volcan de Chiriquí, Panama; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 752, 1902—part, Costa Rica (Cervántes, Birris) and Chiriquí (Volcan de Chiriquí, Boquete); Carriker, Ann. Carnegie Mus., 6, p. 795, 1910—Costa Rica (Coliblanco, La Lagunaria, Santa María de Dota, Azahár de Cartago, Escazú, La Hondura, Juan Viñas; habits).

*Basileuterus bivittatus melanotis* Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Costa Rica.

*Basileuterus tristriatus melanotis* Hellmayr, Proc. Zool. Soc. Lond., 1911, pp. 1092, 1212, 1911—Costa Rica and Chiriquí (crit.); Chapman, Amer. Mus. Nov., 143, pp. 4, 7, 1924—western Panama and Costa Rica (diag.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 63, 1929 (monog.).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 170, 1881—part, Costa Rica (Cervántes, Birris).

*Range*.—Subtropical zone of Costa Rica and extreme western Panama (Boquete and Volcan de Chiriquí).<sup>1</sup>

1: Panama (Boquete, Chiriquí, 1).

***Basileuterus tristriatus chitrensis* Griscom.<sup>2</sup> VERAGUAN WARBLER.**

*Basileuterus tristriatus chitrensis* Griscom, Amer. Mus. Nov., 260, p. 13, 1927—Chitrá, Pacific slope of western Panama, Veragua (type in the American Museum of Natural History, New York); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 62, 1929—Veragua (monog.).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Salvin, Proc. Zool. Soc. Lond., 1870, p. 183—Cordillera del Chucú, Veragua; idem, Ibis, 1870, p. 108—Veragua (crit.); Salvin and Godman,

<sup>1</sup> Five specimens from Boquete, Chiriquí, agree with a Costa Rican series.

<sup>2</sup> *Basileuterus tristriatus chitrensis* Griscom: Very similar to *B. t. melanotis*, but median under parts deeper yellow, approaching pinard yellow rather than straw yellow; chest tinged with olivaceous; back slightly darker olive. Wing, 63, (female) 60–61.

*Material examined*.—Panama: Chitrá, Veragua, 4.

Biol. Centr.-Amer., Aves, 1, p. 170, 1881—part, Panama (Cordillera del Chucú).

*Basileuterus melanotis* (not of Lawrence) Sharpe, Cat. Bds. Brit. Mus., 10, p. 386, 1885—part, spec. b, Cordillera del Chucú, Veragua; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 752, 1902—part, Veragua (Cordillera del Chucú).

*Range*.—Subtropical zone of western Panama, Prov. Veragua (Cordillera del Chucú, Chitrá, Santa Fé).

***Basileuterus tristriatus tacarcunae* Chapman.<sup>1</sup> TACARCUNA WARBLER.**

*Basileuterus tacarcunae* Chapman, Amer. Mus. Nov., 143, p. 6, 1924—east slope of Mount Tacarcuna, eastern Panama (type in the American Museum of Natural History, New York); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 54, 1929 (monog.).

*Range*.—Subtropical zone of Mount Tacarcuna (and probably other mountains) in eastern Panama.

***Basileuterus tristriatus daedalus* Bangs.<sup>2</sup> WESTERN THREE-STRIPED WARBLER.**

*Basileuterus melanotis daedalus* Bangs, Proc. Biol. Soc. Wash., 21, p. 160, 1908—San Antonio, Rio Cali, western Colombia (type in coll. of E. A. and O. Bangs, now in Museum of Comparative Zoology, Cambridge, Mass.; cf. Bangs, Bull. Mus. Comp. Zool., 70, p. 362, 1930).

<sup>1</sup>*Basileuterus tristriatus tacarcunae* Chapman: Differs from its geographical neighbors, *B. f. daedalus* and *B. t. auricularis*, by lacking the blackish antorbital spot, and by olivaceous (ecru olive) instead of wholly or partly black auriculars, and much more orange (yellow ochre) coronal stripe; under parts about the same as in *B. t. daedalus*. In the absence of black markings in the loreal and auricular regions the present form resembles *B. t. meridanus*, from which it is, however, easily separated by decidedly orange coronal stripe, brighter green back, and more yellowish, less buffy under parts. Its nearest ally is undoubtedly *B. t. daedalus*, in which the blackish auricular patch frequently is reduced in extent or even replaced by a dark olivaceous area. From *B. t. chilensis*, of Veragua, it may be distinguished, in addition to the olivaceous (instead of largely blackish) auricular patch, by more orange (less buffy) coronal stripe, decidedly olivaceous (instead of buffy grayish) superciliaries, and bright green upper parts. Wing, 63–65, (female) 59–60.

*Material examined*.—Panama: Mount Tacarcuna, 4.

<sup>2</sup>*Basileuterus tristriatus daedalus* Bangs: Exceedingly close to *B. t. auricularis*, but perhaps separable by having the under parts on average slightly paler, more buffy and less yellowish.

It is with considerable reluctance that we admit this form. Compared with a series from the east Colombian Andes, western birds are frequently duller, less yellowish underneath, but so many are indistinguishable that the propriety of maintaining two races may well be questioned.

*Additional material examined*.—Colombia: La Frijolera, 1; Pueblo Rico, San Juan slopes of the western Andes, 3; San Antonio, 4; Gallera, 1; Miraflores, 3; Salento, 2.—Ecuador: Paramba, Prov. Imbabura, 2; Guala, 6; Pedregal, 1; El Placer, 1; Cayandeled, 2; Canzacota, 1.

*Basileuterus tristriatus daedalus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 61, 1929—western Andes of Colombia and western Ecuador (monog.).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Selater, Proc. Zool. Soc. Lond., 27, p. 137, 1859—Pallatanga, Ecuador; idem, l.c., 28, p. 85, 1860—Cachi-Llacta and Nanegal, Ecuador; idem, Cat. Coll. Amer. Bds., p. 34, 1862—Pallatanga; idem, Proc. Zool. Soc. Lond., 1865, p. 285—part, Ecuador; Heine and Reichenow, Nomencl. Mus. Hein., p. 13, 1890—Cachi-Llacta, Ecuador.

*Basileuterus tristriatus* (not *Myiodioides tristriatus* Tschudi) Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1884, p. 286—Cayandeled, Pedregal, and El Placer, Ecuador; Ménégau, Miss. Serv. Géogr. Armée Més. Arc Mérid. Equat., 9, p. B. 72, 1911—Mindó and "Quito," Ecuador; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—Mindó and road to Nanegal, Ecuador.

*Basileuterus tristriatus tristriatus* Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1091—Pueblo Rico, western Colombia (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 551, 1917—part, La Frijolera, Las Lomitas, San Antonio, Gallera, Cerro Munchique, Miraflores, and Salento, western Andes and western slope of central Andes, Colombia.

*Basileuterus auricularis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 386, 1885—part, spec. c-e, Pallatanga, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1899—Gualea, Ecuador; Goodfellow, Ibis, 1901, p. 315—Gualea and Canzacota, Ecuador.

*Basileuterus tristriatus auricularis* Chapman, Bull. Amer. Mus. N. H., 55, p. 600, 1926—junction of Chancan and Chiguancay rivers and Gualea, Ecuador.

**Range.**—Subtropical zone of western Ecuador (south to the Rio Chimbo and its tributaries) and western Colombia (western Andes and west slope of central Andes).

**\**Basileuterus tristriatus auricularis* Sharpe.<sup>1</sup> EASTERN THREE-STRIPED WARBLER.**

*Basileuterus auricularis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 386, 1885—part, "Bogotá," Colombia (type in British Museum).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Salvin, Cat. Strickland Coll., p. 94, 1882—"Bogotá."

*Basileuterus tristriatus* (not *Myiodioides tristriatus* Tschudi) Berlepsch, Journ. Orn., 32, p. 283, 1884—Bucaramanga, Colombia (crit.).

*Basileuterus tristriatus tristriatus* Chapman, Bull. Amer. Mus. N. H., 36, p. 551, 1917—part, La Candela, La Palma, San Agustín, and Fusugasugá, Colombia.

*Basileuterus tristriatus auricularis* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 59, 1929—eastern Colombia (monog.).

<sup>1</sup>*Basileuterus tristriatus auricularis* Sharpe: Similar to *B. t. tristriatus*, but under parts paler and duller, between baryta yellow and Martius yellow, and median crown stripe less yellowish.

**Additional material examined.**—Colombia: "Bogotá," 9; Bucaramanga, 1; La Candela, 3.

*Range*.—Subtropical zone of eastern Colombia (eastern Andes and eastern slope of central Andes).

2: Colombia ("Bogotá," 1; La Palma, Huila, 1).

***Basileuterus tristriatus baezae* Chapman.<sup>1</sup> BAEZA WARBLER.**

*Basileuterus tristriatus baezae* Chapman, Amer. Mus. Nov., 143, p. 5, 1924—Baeza, eastern Ecuador (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 600, 1926—eastern Ecuador (Baeza, lower Sumaco, and Macas region); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 59, 1929—eastern Ecuador (monog.).

*Basileuterus tristriatus* (not *Myiodiodes tristriatus* Tschudi) Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 74—Machay and Mapoto, Ecuador (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 385, 1885—part, Ecuador (Mapoto, Machay).

*Range*.—Subtropical zone of eastern Ecuador.

**\**Basileuterus tristriatus tristriatus* (Tschudi). THREE-STRIPED WARBLER.**

*Myiodiodes tristriatus* Tschudi, Arch. Naturg., 10, (1), p. 283, 1844—Peru (type in Neuchâtel Museum examined); idem, Unters. Faun. Peru., Aves, p. 193, 1846—"sugar plantation San Pedro, near Lurin," errore; we suggest valley of Vitoc, Dept. Junín, as type locality.

*Basileuterus tristriatus* Taczanowski, Orn. Pér., 1, p. 472, 1884—Auquimarca and Ropaybamba, Peru; Sharpe, Cat. Bds. Brit. Mus., 10, p. 385, 1885—part, Peru; Berlepsch and Hellmayr, Journ. Orn., 53, p. 7, 1905 (note on type); Chapman, Bull. U. S. Nat. Mus., 117, p. 107, 1921—Idma, Urubamba, Peru.

*Basileuterus tristriatus tristriatus* Chapman, Bull. Amer. Mus. N. H., 55, p. 599, 1926—Sabanilla, Zamora Valley, Ecuador; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 57, 1929—Peru, from the Urubamba Valley northward, and extreme southeastern Ecuador (monog.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 427, 1930—Chinchao, Dept. Huánuco, Peru.

*Range*.—Subtropical zone of eastern Peru, south to the Urubamba Valley, and extreme southeastern Ecuador (Sabanilla, Zamora Valley).<sup>2</sup>

3: Peru (Chinchao, 3).

<sup>1</sup>*Basileuterus tristriatus baezae* Chapman: Nearest to *B. t. tristriatus*, but under parts not so bright, the ground color being amber yellow, the breast more strongly clouded with olive; median crown stripe of a duller yellowish tone. From *B. t. auricularis* this race may be separated by darker yellow crown stripe and deeper yellow under surface.

*Material examined*.—Eastern Ecuador: Machay, 3; Mapoto, 1; lower Sumaco, 6.

<sup>2</sup> Some twenty specimens from various parts of Peru are fairly uniform, setting aside some slight individual variation. *B. t. tristriatus* is the most brightly colored of all the races of the group, the under parts varying from bright lemon yellow to empire yellow, generally with little olivaceous clouding on the chest. Birds

**\**Basileuterus tristriatus punctipectus* Chapman.<sup>1</sup> BOLIVIAN  
THREE-STRIPED WARBLER.**

*Basileuterus tristriatus punctipectus* Chapman, Amer. Mus. Nov., 143, p. 5, 1924—Yungas of Cochabamba, Bolivia (type in the American Museum of Natural History, New York); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 56, 1929—Bolivia and southeastern Peru (monog.).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—part, Simacu, Bolivia.

*Basileuterus auricularis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 386, 1885—part, spec. f, g, Simacu, Bolivia.

*Basileuterus tristriatus* (not *Myiodiodes tristriatus* Tschudi) Allen, Bull. Amer. Mus. N. H., 2, p. 79, 1889—Mapiri, Bolivia; Berlepsch and Stolzmann, Ornith., 13, p. 107, 1906—Rio Cadena and Huaynapata, Marcapata, Peru.

**Range.**—Subtropical zone of Bolivia and extreme southeastern Peru (Marcapata and Inambari valleys, Dept. Puno).

1: Bolivia (Roquefalta, Dept. Cochabamba, 1).

***Basileuterus tristriatus meridanus* Sharpe.<sup>2</sup> MÉRIDA WARBLER.**

from the extreme northwest (Chaupe) seem to be indistinguishable from others taken in the Urubamba region. While the bright yellow under surface usually serves to separate this form, occasional individuals, such as two from Chinchao, are hardly brighter underneath than certain dark-bellied examples of *B. t. baezae*. A single adult male from southeastern Ecuador (Sabanilla, Zamora Valley), however, is perfectly typical of *tristriatus*.

**Additional material examined.**—Ecuador: Sabanilla, 1.—Peru: Chaupe, 3; Santa Rosa, lower Marañón Valley, 1; Lomo Santo, lower Marañón Valley, 1; Utcuyacu, Junín, 3; Chelpes, Junín, 3; Ropaybamba, Junín, 1; Idma, Urubamba, 2; unspecified, 1 (the type).

<sup>1</sup> *Basileuterus tristriatus punctipectus* Chapman: Similar to *B. t. tristriatus*, but back slightly darker (near olive citrine) and under parts paler, straw yellow rather than lemon yellow, with more or less distinct olive freckles on the chest.

There is much individual variation, as far as the coloration of the light crown stripe is concerned, and even the characters given above are by no means thoroughly constant. Certain specimens of *B. t. auricularis*, from "Bogotá," have the chest just as distinctly freckled with olive, while some from Bolivia are practically plain-breasted like *B. t. tristriatus*. Two birds from extreme southeastern Peru seem to be referable to *punctipectus*.

**Additional material examined.**—Bolivia: Yungas of Cochabamba, 6; Quebrada Honda, Yungas of Cochabamba, 4; Chaco, Yungas of La Paz, 3; Simacu, La Paz, 1.—Peru: Huaynapata, 1; Rio Cadena, 1.

<sup>2</sup> *Basileuterus tristriatus meridanus* Sharpe: Differs from *B. t. auricularis* by the reduction or even absence of the blackish loreal and auricular spots; inconspicuous buffy superciliaries; less pronounced blackish lateral crown stripes; very dull citrine, posteriorly more yellowish (ecru olive) median vertical stripe; duller, less greenish back, etc. Birds from La Cumbre de Valencia, Carabobo, and Bucarito, near Tocuyo, Lara, agree with a topotypical series.

**Material examined.**—Venezuela: Sierra of Mérida (El Valle, La Hechisera, Culata, etc.), 14; mountains near Bucarito, Tocuyo, Lara, 2; La Cumbre de Valencia, Carabobo, 10; near [=above] Puerto Cabello, Carabobo, 2.



*Basileuterus meridanus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 387, 1885—Mérida, Venezuela (type in British Museum); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 55, 1929—part, Andes of Mérida east to La Cumbre de Valencia (crit.).

*Basileuterus tristriatus meridanus* Hellmayr and Seilern, Arch. Naturg., 78, A, Heft 5, p. 47, 1912—La Cumbre de Valencia, Carabobo, and "Caripé" (errore), Venezuela (crit.).

*Basileuterus bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Sclater and Salvin, Proc. Zool. Soc. Lond., 1870, p. 780—Mérida.

*Range*.—Subtropical zone of northwestern Venezuela (Sierra of Mérida east to La Cumbre de Valencia, Carabobo).<sup>1</sup>

***Basileuterus tristriatus bessereri* Hellmayr.<sup>2</sup> BESSERER'S  
WARBLER.**

*Basileuterus tristriatus bessereri* Hellmayr, Anz. Orn. Ges. Bay., 1, No. 6, p. 44, 1922—Silla de Caracas, Venezuela (type in Munich Museum); idem, Arch. Naturg., 90, A, Heft 2, p. 158, 1924—Galipán, Cerro del Avila, and Silla de Caracas, Venezuela (crit.).

*Basileuterus meridanus* (not of Sharpe) Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 55, 1929—part, Silla de Caracas, Galipán, and Cotiza, Venezuela.

*Range*.—Subtropical zone of northern Venezuela in Dept. Federal (mountains of the Caracas region).

***Basileuterus trifasciatus trifasciatus* Taczanowski.<sup>3</sup> THREE-  
BANDED WARBLER.**

*Basileuterus trifasciatus* Taczanowski, Proc. Zool. Soc. Lond., 1880, p. 191—Callacate, northern Peru (type lost, formerly in Warsaw Museum; cf. Sztolcman and Domaniewski, Ann. Zool. Mus. Pol. Hist. Nat., 6, p. 165,

<sup>1</sup> Two specimens collected by A. Mocquerys in the Tring Museum are labeled "Caripé," but this is clearly a mistake.

<sup>2</sup> *Basileuterus tristriatus bessereri* Hellmayr: Agreeing with *B. t. meridanus* in lacking distinct blackish spots on loreal region and auriculars and in head markings, but under parts much paler, primrose to Naples yellow; back lighter and purer greenish; bill smaller.

*Material examined*.—Venezuela: Galipán, Cerro del Avila, 17; Silla de Caracas, 5.

<sup>3</sup> *Basileuterus trifasciatus trifasciatus* Taczanowski, in spite of its superficial resemblance, appears to be specifically distinct from *B. tristriatus*. Compared with a series of the typical Peruvian form, it differs by smaller size, much smaller, shorter bill; light grayish olive median crown stripe with little lemon yellow suffusion at the concealed bases of the anterior feathers; much narrower, dusky rather than deep black lateral borders; grayish forehead; smoke gray (not olive buff), also less pronounced superciliaries; smoke gray sides of the head with only a dusky postocular streak; absence of the black antorbicular spot; dull grayish (roman) green upper back, passing into warbler green on rump and tail coverts (instead of uniform dark citrine); lighter, warbler green rather than citrine edges to wings and tail; nearly white under wing coverts. Wing (male), 56–59; tail, 51–53; bill, 9–10.

*Material examined*.—Peru: Palambla, Piura, 2; San Felipe, Rio Huancabamba, 1.

1927); idem, *Orn. Pér.*, 1, p. 473, 1884—Callacate and Paucal, Peru; Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 388, 1885—part, Peru.

*Basileuterus trifasciatus trifasciatus* Todd, *Proc. U. S. Nat. Mus.*, 74, art. 7, p. 64, 1929—Palambla, Peru (monog.).

*Range*.—Subtropical zone of northwestern Peru, in depts. of Cajamarca (Callacate; Paucal) and Piura (Palambla).

***Basileuterus trifasciatus nitidior* Chapman.<sup>1</sup> NORTHERN THREE-BANDED WARBLER.**

*Basileuterus trifasciatus nitidior* Chapman, *Amer. Mus. Nov.*, 143, p. 8, 1924—El Chiral, Santa Rosa-Zaruma trail, Prov. del Oro, southwestern Ecuador (type in the American Museum of Natural History, New York); idem, *Bull. Amer. Mus. N. H.*, 55, p. 600, 1926—El Chiral, Punta Santa Ana, Guachanamá, Celica, and Alamor, Ecuador; Todd, *Proc. U. S. Nat. Mus.*, 74, art. 7, p. 65, 1929—southwestern Ecuador (monog.).

*Basileuterus trifasciatus* (not of Taczanowski) Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 388, 1885—part, Ecuador ("Jima").

*Range*.—Subtropical zone of southwestern Ecuador, in depts. of El Oro and Loja.

**\**Basileuterus hypoleucus* Bonaparte.<sup>2</sup> WHITE-BELLIED WARBLER.**

*Basileuterus hypoleucus* (Cabanis MS.) Bonaparte, *Consp. Gen. Av.*, 1, (2), p. 313, end of 1850—Brazil, probably São Paulo (type in Berlin Museum); Burmeister, *Syst. Uebers. Th. Bras.*, 3, p. 113, 1856—Brazil (crit.); Pelzeln, *Orn. Bras.*, 2, p. 72, 1868—Ypanema, São Paulo, and Goyaz, Goyaz (spec. examined); Reinhardt, *Vidensk. Medd. Naturhist. Foren.*, 1870, p. 445—Lagôa Santa, Minas Geraes; Sharpe, *Cat. Bds. Brit. Mus.*, 10, p. 388, 1885—Lagôa Santa and Ypanema, Brazil; Allen, *Bull. Amer.*

<sup>1</sup>*Basileuterus trifasciatus nitidior* Chapman: Similar to *B. t. trifasciatus*, but central coronal stripe more olive with the lemon yellow suffusion in the anterior portion much more extensive; upper back less grayish; superciliaries and sides of head slightly darker grayish; throat less whitish; under parts generally deeper yellow. Wing, 55–57; tail, 49–53; bill, 10–11.

*Material examined*.—Ecuador: Lunamá, 1; Alamor, 1; Las Piñas, 1; Zaruma, 1.

<sup>2</sup>*Basileuterus hypoleucus* Bonaparte differs from *B. c. auricapillus* by having the under parts dingy white, frequently with a grayish tinge across chest and on sides of breast—instead of uniform bright lemon chrome. However, certain specimens, such as one from Goyaz (Rio Thesouras) and one from São Paulo (Ypanema), have the median portion of the under parts flammulated or washed with pale yellow, betraying close affinity to *auricapillus*. A similar example from western Paraguay (Puerto Pinasco) has been recorded by Wetmore (l.c.). Although *hypoleucus* and *auricapillus* have yet to be taken at exactly the same localities, their ranges in general seem to overlap to a certain extent, both having been obtained in Matto Grosso, São Paulo, and Paraguay. Still, the intermediate character of the birds mentioned above casts serious doubt on their specific distinctness, and makes the desirability of further information on their breeding ranges strongly felt.

*Additional material examined*.—Minas Geraes: Rio Jordão, Prov. Araguay, 3; Agua Suja, near Bagagem, 1.—Goyaz: Rio Thesouras, 1; Goyaz City, 2.—Matto Grosso: Chapada, 10.—São Paulo: Ypanema, 4; Victoria, 7.

Mus. N. H., 3, p. 344, 1891—Chapada, Matto Grosso (plum., crit.); Salvadori, Boll. Mus. Zool. Torino, 14, No. 378, p. 3, 1900—Urucúm, Matto Grosso; Ihering and Ihering, Cat. Faun. Braz., 1, p. 333, 1907—São Paulo (San José do Rio Pardo, Itatiba, Franca, Avanhanda, and Itapura); Hellmayr, Nov. Zool., 15, p. 19, 1908—Rio Thesouras, Goyaz (crit.); Wetmore, Bull. U. S. Nat. Mus., 155, p. 368, 1926—west of Puerto Pinasco, Paraguay (crit.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 65, 1929 (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 340, 1930—Urucúm, Matto Grosso.

*Range*.—Interior of southern Brazil, in states of Minas Geraes (Lagôa Santa; Agua Suja, near Bagagem; Rio Jordão, Prov. Araquary), Goyaz (Goyaz City; Rio Thesouras), Matto Grosso (Chapada; Urucúm), and São Paulo (San José do Rio Pardo; Itatiba; Franca; Avanhanda; Itapura; Victoria do Botucatú; Ypanema), and western Paraguay (west of Puerto Pinasco).

5: Brazil (Chapada, Matto Grosso, 3; Urucúm de Corumbá, Matto Grosso, 2).

**\**Basileuterus culicivorus auricapillus* (Swainson). GOLDEN-CROWNED WARBLER.**

*Setophaga auricapilla* Swainson, Anim. Menag., p. 293, Dec. 31, 1837—"Mexico and Brazil" (type, from Brazil, in coll. of W. Swainson, now in University Museum, Cambridge, Engl.,<sup>1</sup> examined).

*Sylvia vermivora* (not *Motacilla vermivora* Gmelin) Vieillot, Nouv. Dict. Hist. Nat., nouv. éd., 11, p. 278, 1817—part, reference to "Contramaestre coronado" Azara, No. 154; Paraguay.

*Muscicapa vermivora* Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 51, 1837—part, Corrientes (spec. in Paris Museum examined).

*Muscicapara vermivora* d'Orbigny, Voy. Amér. Mérid., Ois., p. 324, 1840—part, Corrientes.

*Basileuterus vermivorus* Cabanis, Mus. Hein., 1, p. 17, 1851—Brazil (synon. in part); Burmeister, Syst. Uebers. Th. Bras., 3, p. 113, 1856—Nova Friburgo, Rio (synon. in part); Baird, Rev. Amer. Bds., 1, p. 243, 1865—part, Brazil; Slater, Proc. Zool. Soc. Lond., 1865, p. 283—part, Brazil and Paraguay; Pelzel, Orn. Bras., 2, p. 71, 1868—Rio de Janeiro, São Paulo (Mattodentro, Ypanema, Ytararé), and São Vicente (Matto Grosso) (spec. in Vienna Museum examined); Euler, Journ. Orn., 16, p. 190, 1868—Cantagallo, Rio (nest and eggs descr.); Reinhardt, Vidensk. Medd.

<sup>1</sup> The specimen bears a Swainsonian label with the inscription: "*Setophaga auricapilla* Sw. Sale 1834. Brazil." The Museum label reads: "E Mus. Acad. Cantabrigiae. Swainson Collection. *B. vermivorus*." The habitat "Mexico" undoubtedly refers to *B. c. culicivorus*, of which Swainson might have seen a specimen believed to be identical with the Brazilian bird, but his description, notably the passage "above olive green," clearly applies to the latter. The type agrees with examples from Paraguay and Espirito Santo (Engenheiro Reeve) in the British Museum, the back being indeed dark citrine. Todd (Proc. U. S. Nat. Mus., 74, art. 7, p. 68, 1929) suggests Rio de Janeiro as an appropriate type locality.

Naturhist. Foren., 1870, p. 445—Uberaba, Minas Geraes; Hamilton, Ibis, 1871, p. 302—São Paulo (habits); Berlepsch, Journ. Orn., 21, p. 231, 1873—Blumenau, Santa Catharina (range in part, Paraguay and Brazil); Cabanis, l.c., 22, p. 82, 1874—Cantagallo, Rio; White, Proc. Zool. Soc. Lond., 1882, p. 594—San Javier, Misiones.

*Basileuterus auricapillus* Berlepsch, Ibis, 1881, p. 240 (nomencl.); Forbes, Ibis, 1881, p. 329—Quipapá, Pernambuco; Sharpe, Cat. Bds. Brit. Mus., 10, p. 393, 1885—part, spec. a-g, Pernambuco and Mattodentro, Brazil; Sclater and Hudson, Arg. Ornith., 1, p. 21, 1888—Paraguay and Misiones; Kerr, Ibis, 1892, p. 123—lower Pilcomayo; Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—São Lourenço, Rio Grande do Sul; idem, Rev. Mus. Paul., 3, p. 134, 1899—Iguapé, São Paulo; Euler, l.c., 4, p. 15, 1900 (nest descr.); Ihering, l.c., 4, p. 152, 1900—Cantagallo and Nova Friburgo; Salvadori, Boll. Mus. Zool. Torino, 15, No. 378, p. 17, 1900—Tebicuarí, Paraguay; Oberholser, Proc. U. S. Nat. Mus., 25, p. 141, 1902—Sapucay, Paraguay; Lillo, Anal. Mus. Nac. Buenos Aires, 8, p. 173, 1902—Tafi, Tucumán; idem, Rev. Letr. Cienc. Soc., 3, p. 40, 1905—Tafi; Ihering, Cat. Faun. Braz., 1, p. 333, 1907—São Paulo (Ypiranga, Campos de Jordão, Alto da Serra, Itararé, Itapura, Piquete, Iguapé) and Paraná (Ourinho); Lüderwaldt, Zool. Jahrb. (Syst.), 27, p. 356, 1909—Campo Itatiaya; Dabbene, Anal. Mus. Nac. Buenos Aires, (3), 11, p. 369, 1910—Cordoba, La Rioja, Tucumán, Chaco (Ocampo), Misiones, and Buenos Aires (Barracas al Sud); Reiser, Denks. Math.-Naturw. Kl. Akad. Wiss. Wien, 76, p. 78, 1910—Piauhý (Santo Antonio de Gilboez, Barra do Cocal and above Pintados, Rio Parnahyba); Chubb, Ibis, 1910, p. 615—Sapucay, Paraguay (crit.); Grant, Ibis, 1911, p. 88—Riacho Ancho, Chaco, Argentina; Bertoni, Faun. Parag., p. 498, 1914—Alto Paraná, Paraguay; Giacomelli, El Hornero, 3, p. 67, 1923—Sierra of La Rioja; Pereyra, l.c., 3, p. 170, 1923—San Isidro, Buenos Aires; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 41, 1926—Ceará.

*Basileuterus auricapillus auricapillus* Hartert and Venturi, Nov. Zool., 16, p. 166, 1909—Buenos Aires (Barracas al Sud), Santa Fé (Ocampo), and Tucumán (Quebrada de los Piedros); Dabbene, Anal. Mus. Nac. Buenos Aires, 23, p. 348, 1912—Paso Yuvay, Paraguay; Marelli, Mem. Min. Obr. Publ. for 1922-23, p. 656, 1924—Prov. Buenos Aires; Hellmayr, Nov. Zool., 32, p. 180, 1926—Corrientes; Wetmore, Bull. U. S. Nat. Mus., 133, p. 368, 1926—Chaco (Las Palmas) and Uruguay (Rio Cebollati, near Lazcano); Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 185, 1926—Paraná (Fazenda Ferreira, Fazenda Durski, and Therezina); Holt, Bull. Amer. Mus. N. H., 57, p. 314, 1928—Serra do Itatiaya, Brazil; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 259, 1929—Maranhão (Grajahú, Tranqueira, São Francisco, Fazenda Inhuma), Piauhý (Ibiapaba), and Goyaz (Santo Antonio); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 67, 1929 (monog.); Naumburg, Bull. Amer. Mus. N. H., 60, p. 340, 1930—Paraguay (Rio Negro) and Matto Grosso (Utiarity).

*Range.*—Eastern and southern Brazil, from Maranhão, Piauhý, and Ceará south to Matto Grosso (Utiarity; São Vicente) and Rio

Grande do Sul; Uruguay; Paraguay; northern Argentina south to Cordoba and Buenos Aires.<sup>1</sup>

32: Brazil (Grajahú, Maranhão, 3; Tranqueira, Maranhão, 5; São Francisco, Maranhão, 1; Fazenda Inhumá, Alto Parnahyba, Maranhão, 2; Ibiapaba, Piauí, 1; Boa Vista, Santo Antonio, Goyaz, 1; Serra Baturité, Ceará, 2; Therezopolis, Rio de Janeiro, 4; Joinville, Santa Catharina, 2); Uruguay (Quebrada de los Cuervos, 2); Argentina (Concepción, Tucumán, 6; Ocampo, Santa Fé, 1; Caraguatay, Misiones, 1; Puerto Segundo, Misiones, 1).

**\**Basileuterus culicivorus viridescens* Todd.<sup>2</sup> GREENISH WARBLER.**

*Basileuterus auricapillus viridescens* Todd, Proc. Biol. Soc. Wash., 26, p. 170, 1913—Buenavista, Bolivia (type in Carnegie Museum); Hellmayr, Nov. Zool., 32, p. 180, 1925—Chiquitos, Bolivia (crit.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 69, 1929—eastern Bolivia (monog.).

*Muscicapa vermivora* (not *Motacilla vermivora* Gmelin) Lafresnaye and d'Orbigny, Syn. Av., 1, in Mag. Zool., 7, cl. 2, p. 51, 1837—part, Chiquitos, Bolivia.

*Muscicapara vermivora* d'Orbigny, Voy. Amér. Mérid., Ois., p. 324, 1840—part, Monte Grande, forest on the road from Santa Cruz to Chiquitos, Bolivia.

*Basileuterus vermivorus* Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—between Santa Cruz de la Sierra and Chiquitos (ex d'Orbigny).

*Range*.—Tropical zone of eastern Bolivia, in Dept. of Santa Cruz. 1: Bolivia (Buenavista, 1).

***Basileuterus culicivorus olivascens* Chapman.<sup>3</sup> OLIVASCENT WARBLER.**

<sup>1</sup> I am unable to perceive any constant differences between birds from Buenos Aires, Paraguay, and eastern Brazil. Specimens from Tucumán closely approach the doubtfully separable Bolivian race (*viridescens*).

*Additional material examined*.—Brazil: Piauí (Santo Antonio de Gilboez and Rio Parnahyba), 3; Bahia, 3; Rio de Janeiro, 2; Itararé, São Paulo, 2; São Vicente, Matto Grosso, 1; Rio Grande do Sul, 2.—Paraguay: Sapucay, 2; Bernalcué, near Asunción, 1.—Argentina: Barracas al Sud, Buenos Aires, 2; Tañi, Tucumán, 3; Corrientes, 2.

<sup>2</sup> *Basileuterus culicivorus viridescens* Todd: Exceedingly close to *B. c. auricapillus*, but perhaps distinguishable by more greenish (less citrine) upper parts and narrower, less blackish lateral crown stripes.

We have not enough material to form a definite opinion on the value of this race, but certain Brazilian specimens are hardly different, even with respect to the dusky crown stripes.

*Additional material examined*.—Bolivia: Buenavista, 1; Chiquitos, 1.

<sup>3</sup> *Basileuterus culicivorus olivascens* Chapman: Very close to *B. c. auricapillus*, but upper parts duller green (near olive citrine), and edges to wings and tail grayish olive instead of bright citrine.

Birds from Sucre (inland of Cumaná) and the Caura Valley are identical with a topotypical Trinidad series, while those from Colombia are slightly more grayish

*Basileuterus vermicivorus olivascens* Chapman, Auk, 10, p. 343, 1893—Princetown, Trinidad (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 6, p. 24, 1894—Princetown, Trinidad; Phelps, Auk, 14, pp. 363, 368, 1897—San Antonio [Sucre], Venezuela (crit.).

*Basileuterus auricapillus olivascens* Hellmayr, Nov. Zool., 13, p. 7, 1906—Caparo and Laventille, Trinidad, and Cumaná, Venezuela (crit.); Cherrie, Sci. Bull., Mus. Brookl. Inst., 1, p. 187, 1906—Heights of Aripo, Trinidad; idem, l.c., 1, p. 356, 1908—Carenage and Heights of Aripo, Trinidad (nest and eggs descr.); Stone, Proc. Acad. Nat. Sci. Phila., 65, p. 208, 1913—Cariquito, Venezuela; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 153, 1916—Guanoco, Orinoco Delta, Venezuela; Chapman, Bull. Amer. Mus. N. H., 36, p. 552, 1917—Buena Vista, eastern slope of eastern Andes, Colombia; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 70, 1929 (monog.); Chapman, Bull. Amer. Mus. N. H., 63, p. 118, 1931—Roraima (crit.).

*Basileuterus auricapillus olivaceus* (lapsus) Beebe, Zoologica (N.Y.), 1, p. 101, 1909—Guanoco, Orinoco Delta, Venezuela.

*Basileuterus olivascens* Chubb, Bds. Brit. Guiana, 2, p. 417, 1921—Roraima.

*Basileuterus vermicivorus* (not *Motacilla vermicivora* Gmelin) Cabanis, in Schomburgk, Reisen Brit. Guiana, 3, p. 667, "1848" [=1849]—Roraima (3,000–4,000 ft.), British Guiana; Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—"Bogotá"; idem, Cat. Coll. Amer. Bds., p. 34, 1862—"Bogotá" and Trinidad; idem, Proc. Zool. Soc. Lond., 1865, p. 283—part, Guiana, "Nova-Grenada," and Trinidad; Finsch, l.c., 1870, p. 565—"Trinidad"; Williams, Bull. Dept. Agric. Trin. Tob., 20, p. 127, 1922—Palo Seco, Trinidad.

*Trichas bivittatus* (not *Muscicapa bivittata* Lafresnaye and d'Orbigny) Léotaud, Ois. Trinidad, p. 184, 1866—Trinidad.

*Basileuterus aurocapillus* (not *Selophaga auricapilla* Swainson) Berlepsch, Journ. Orn., 32, p. 284 (in text), 1884—"Bogotá" (crit.).

*Basileuterus auricapillus* Salvin, Ibis, 1885, p. 203—Roraima; Sharpe, Cat. Bds. Brit. Mus., 10, p. 393, 1885—part, spec. h-s, Roraima, Trinidad, and "Bogotá."

**Range.**—Island of Trinidad; British Guiana (Roraima; Annai); northeastern Venezuela (states of Sucre and Monagas; Delta Amacuro); and west along the Orinoco and its southerly tributaries to the eastern slope of the eastern Andes of Colombia (Rio Negro, Palmar, and La Colorada, Boyacá; Buena Vista, above Villavicencio).

olive above. Specimens from British Guiana are again a little different, being slightly larger and a shade more brownish olive on the back. The variation is, however, insignificant and does not, to my mind, require nomenclatorial recognition, though the paler (yellowish white) under tail coverts of the Colombian skins plainly indicate a step in the direction of *B. c. cabanisi*.

**Material examined.**—Trinidad: Caparo, 18; Laventille, 1.—Venezuela: Sucre (San Antonio, Cumanacoa, Los Palmales, etc.), 12; Caura Valley, 2.—British Guiana: Roraima, 8; Annai, 1.—Colombia: "Bogotá," 3; Buena Vista, above Villavicencio, 3.

**\**Basileuterus culicivorus cabanisi* Berlepsch.<sup>1</sup> CABANIS'S  
WARBLER.**

*Basileuterus cabanisi* Berlepsch, Orn. Centralbl., 4, p. 63, 1879—San Esteban and Puerto Cabello, Carabobo, Venezuela (type, from Puerto Cabello, in coll. of H. von Berlepsch, now in Frankfurt Museum, examined); idem, Journ. Orn., 27, p. 207, 1879—same localities (excl. Bogotá and Trinidad ref.); idem, l.c., 32, p. 283, 1884—Bucaramanga, Colombia (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 551, 1917—Peque (northern end of western Andes) and Miraflores (west slope of central Andes), Colombia; Hellmayr, Arch. Naturg., 90, A, Heft 2, p. 157, 1924—Loma Redonda, near Caracas, Venezuela (crit.).

*Basileuterus cabanisi cabanisi* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 71, 1929 (monog.).

**Range.**—Tropical and Subtropical zones of northwestern Venezuela (from the Caracas region to Tachira) and parts of Colombia (Santander; Peque, Antioquia; Miraflores and Primavera, Cauca).<sup>2</sup>

12: Venezuela (Caracas, 7; Macuto, Caracas, 1; Lake Valencia, Carabobo, 2; Culata, Mérida, 1; Colón, Tachira, 1).

***Basileuterus culicivorus indignus* Todd.<sup>3</sup> SANTA MARTA  
WARBLER.**

*Basileuterus cabanisi indignus* Todd, Proc. Biol. Soc. Wash., 29, p. 95, 1916—La Tigrera, Colombia (type in Carnegie Museum); Todd and Carriker, Ann. Carnegie Mus., 14, p. 440, 1922—Bonda (?), Las Nubes, Onaca, La Tigrera, Las Vegas, and Minca (crit., habits); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 73, 1929 (monog.).

*Basileuterus cabanisi* (not of Berlepsch) Salvin and Godman, Ibis, 1880, p. 117—"Mineá"—Minca, Colombia; Sharpe, Cat. Bds. Brit. Mus., 10, p. 384, 1885—Minca; Bangs, Proc. Biol. Soc. Wash., 12, p. 144, 1898—

<sup>1</sup> I have no hesitation in associating *B. cabanisi* in the same specific group with *auricapillus* and *culicivorus*, its color characters being just intermediate between the South American and Central American representatives.

<sup>2</sup> Birds from Mérida agree with those from the Venezuelan north coast. A single unsexed specimen from Bucaramanga and five adult males from Primavera, Cauca, Colombia, differ by having the median coronal spot much more strongly tinged with orange (or mars yellow), though a few Mérida skins are similar.

**Additional material examined.**—Venezuela: Puerto Cabello, 1; San Esteban, 1; Loma Redonda, near Caracas, 1; Mérida, 14; Valle, Mérida, 3; Culata, Mérida, 1.—Colombia: Bucaramanga, Santander, 1; Primavera, western Andes, 5.

<sup>3</sup> *Basileuterus culicivorus indignus* Todd: "Similar to *B. c. cabanisi*, but coronal spot usually lemon yellow, with little or no mars yellow." (Todd, l.c.). I am unable to substantiate this character in the series at hand, which is admittedly rather unsatisfactory, consisting as it does mostly of females and unsexed specimens. I notice, however, that even certain males from Mérida have the coronal spot plain lemon yellow down to the base of the feathers, and cannot be told in any way from Santa Marta birds. Mr. Todd, however, who had the advantage of studying much larger series, admits the form as valid.

**Material examined.**—Colombia: Don Amo, 2; Minca, 1; Onaca, 5; "Santa Marta," 1.

"Santa Marta"; Allen, Bull. Amer. Mus. N. H., 13, p. 176, 1900—Minca, Las Nubes, and Onaca, Colombia.

**Range.**—Upper Tropical zone of the Santa Marta region in northern Colombia.

**\**Basileuterus culicivorus godmani* Berlepsch. GODMAN'S WARBLER.**

*Basileuterus godmani* Berlepsch, Auk, 5, p. 450, 1888—"Veragua"—Chiriquí, Panama (type in coll. of H. von Berlepsch, now in Frankfurt Museum, examined).

*Basileuterus godmanni* (sic) Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 6, p. 10, 1893—San Marcos, Sabanilla, and Naránjo de Cartago, Costa Rica (crit.).

*Basileuterus culicivorus godmani* Bangs, Proc. N. Engl. Zool. Cl., 3, p. 60, 1902—Boquete and Volcan de Chiriquí, Panama; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 756, 1902—Chiriquí, Veragua, and Costa Rica (San Marcos); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 277, 1907—Guayábo, Costa Rica; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 77, 1929—Costa Rica (except northwestern part) and western Panama (monog.).

*Basileuterus culicivorus* (not *Sylvia culicivora* Lichtenstein) Baird, Rev. Amer. Bds., 1, p. 245, 1865—part, Barránca, Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N.Y., 9, p. 95, 1868—Costa Rica (Barránca, Guaitil, Grecia, Dota); Salvin, Proc. Zool. Soc. Lond., 1870, p. 183—Calovévora, Veragua; Boucard, Proc. Zool. Soc. Lond., 1878, p. 52—San José, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 171, 1881—part, Costa Rica and Panama; Sharpe, Cat. Bds. Brit. Mus., 10, p. 383, 1885—part, spec. k-s, Costa Rica (Guaitil), Chiriquí, and Calovévora (Veragua); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Sabanilla de Alajuela, Naránjo de Cartago, and Dota, Costa Rica.

*Basileuterus culicivorus culicivorus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 753, 1902—part, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 794, 1910—Costa Rica (excl. Miravalles and Tenorio); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 74, 1929—part, Costa Rica (El General and Cerro Santa Maria).

**Range.**—Western Panama, east to Veragua (Calovévora), and Costa Rica, except the northwestern section (Guanacaste).<sup>1</sup>

4: Costa Rica (Guayábo, 1; Peralta, 2; unspecified, 1).

<sup>1</sup>The segregation of the two Central American races presents unusual difficulties owing to the intermediacy of most of the Costa Rican population of this warbler, and it is really a matter of personal opinion where the demarcation line between *godmani* and *culicivorus* should be drawn. As remarked by Mr. Todd, many specimens from Caribbean and southern Costa Rica (Térraba Valley) are indistinguishable from Chiriquí birds, while others can hardly be separated from the Mexican form. However, taken as a whole the series from Costa Rica, excepting the inhabitants of Guanacaste, seem better referred to *B. c. godmani*. Specimens from Santa Maria de Dota and El General, listed by Todd under *B. c. culicivorus*, I would unhesitatingly place with *godmani*, such a disposition being in accordance with the geographical distribution of the two races as outlined by this author.

Forty-five specimens from Costa Rica and five from Chiriquí examined.



**\**Basileuterus culicivorus culicivorus* (Lichtenstein). LICHTENSTEIN'S WARBLER.**

*Sylvia culicivora* Lichtenstein, Preis-Verz. Säug., Vögel, etc., Mexico, p. 2, 1830—Mexico (type from Jalapa, Vera Cruz, in Berlin Museum); Cabanis, Journ. Orn., 11, p. 57, 1863 (reprint of orig. descr.).

*Basileuterus culicivora* Bonaparte, Consp. Gen. Av., 1, (2), p. 313, end of 1850—Jalapa, Mexico (spec. in Berlin Museum).

*Basileuterus culicivorus* Cabanis, Mus. Heine., 1, p. 17, 1851—Jalapa (diag.); Baird, Rev. Amer. Bds., 1, p. 245, 1865—part, Mexico and Guatemala (Choctum); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—temperate region of Vera Cruz; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 40, 1878—Guatemala; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 171, 1881—part, Mexico and Guatemala; Sharpe, Cat. Bds. Brit. Mus., 10, p. 383, 1885—part, spec. a-i, Mexico (Oaxaca, Jalapa) and Guatemala (Volcan de Agua, Coban, Volcan de Fuego, Choctum); Underwood, Ibis, 1896, p. 434—Miravalles, Costa Rica; Chapman, Bull. Amer. Mus. N. H., 10, p. 25, 1898—Jalapa, Vera Cruz (habits); Nelson, Auk, 15, p. 159, 1898—part, Pluma, western Oaxaca; Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 131, 1907—Patulul, Guatemala.

*Basileuterus culicivorus culicivorus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 753, 1902—part, southern Mexico and Guatemala; Carriker, Ann. Carnegie Mus., 6, p. 794, 1910—part, northwestern Costa Rica (Miravalles, Tenorio, La Vijagua); Peters, Auk, 30, p. 378, 1913—Camp Mengel, Quintana Roo; Bangs and Peters, Bull. Mus. Comp. Zool., 67, p. 484, 1927—Presidio and Motzorongo, Vera Cruz; Austin, l.c., 69, p. 389, 1929—Mountain Cow, British Honduras; Peters, l.c., 69, p. 465, 1929—east of Lancetilla, Honduras; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 74, 1929—part (monog., excl. of Jalisco, western Mexico); Griscom, Bull. Amer. Mus. N. H., 64, p. 343, 1932—Guatemala (Finca Sepacuite, Secanquim, Finca El Soche, Finca El Espino); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 334, 1932—Lancetilla, Honduras.

*Basileuterus brasieri* (not *Muscicapa brasieri* Giraud) Selater, Proc. Zool. Soc. Lond., 24, p. 292, 1856—Cordova, Vera Cruz; idem, l.c., 27, p. 374, 1859—Teotalcingo, Oaxaca; Selater and Salvin, Ibis, 1860, p. 274—Guatemala; Selater, Proc. Zool. Soc. Lond., 1865, p. 283—Mexico (in part).

**Range.**—Eastern Mexico, from southern Vera Cruz and Puebla south to Oaxaca and Chiapas; Guatemala; British Honduras; Honduras; Nicaragua; and northwestern Costa Rica (Guanacaste).<sup>1</sup>

4: Guatemala (Patulul, Sololá, 2); Costa Rica (Miravalles, 2).

<sup>1</sup> Birds from the southern part of the range (Nicaragua and Costa Rica), as a rule, have the median coronal stripe more suffused with orange, but this is at best an average character and hardly constant enough for recognition in nomenclature. This is also the opinion of Mr. Todd, who had much more comprehensive material at his command than I have been able to examine.

**Additional material examined.**—Forty-six specimens from eastern Mexico, Guatemala, Honduras (San Pedro), Nicaragua, and Guanacaste.

**Basileuterus culicivorus flavescens** Ridgway.<sup>1</sup> JALISCO WARBLER.

*Basileuterus culicivorus flavescens* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 755, 1902—San Sebastian, Jalisco (type in U. S. National Museum).

*Basileuterus culicivorus* (not *Sylvia culicivora* Lichtenstein) Nelson, Auk, 15, p. 159, 1898—part, San Sebastian, Jalisco.

*Basileuterus culicivorus culicivorus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 74, 1929—part, Jalisco (San Sebastian).

*Range*.—Western Mexico, in State of Jalisco (San Sebastian).

**\*Basileuterus culicivorus brasherii** (Giraud). BRASHER'S WARBLER.

*Muscicapa brasierii* (typographical error) Giraud, Descr. Sixteen Spec. N. Amer. Birds, fol. 25, pl. [6], fig. 2, 1841—"Texas" (type now in U. S. National Museum); Sclater, Proc. Zool. Soc. Lond., 23, p. 66, 1855 (crit.).

*Basileuterus brasherii* Berier, Bull. Nutt. Orn. Cl., 5, p. 239, 1880 (note on specific name).

*Basileuterus culicivorus brasherii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 755, 1902—northeastern Mexico (monog.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 76, 1929 (monog.).

*Basileuterus culicivorus brasherii* Phillips, Auk, 28, p. 87, 1911—Tamaulipas (Santa Leonor, Caballeros, Guiaves, Rio Martinez, Rio Cruz).

*Basileuterus culicivorus* (not *Sylvia culicivora* Lichtenstein) Richmond, Proc. U. S. Nat. Mus., 18, p. 632, 1896—Altamira, Tamaulipas.

*Range*.—Northeastern Mexico, in states of San Luis Potosi, Nuevo Leon, Tamaulipas, and northern Vera Cruz (Rivera).

2: Mexico (Tampico, Tamaulipas, 2).

**Basileuterus melanogenys ignotus** Nelson.<sup>2</sup> MOUNT PIRRI WARBLER.

*Basileuterus melanogenys ignotus* Nelson, Smiths. Misc. Coll., 60, No. 3, p. 21, 1912—Mount Pirri, near head of Rio Limón, eastern Panama (type in U. S. National Museum examined).

*Basileuterus ignotus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 79, 1929—Mount Pirri, Panama (monog.).

*Range*.—Subtropical zone of eastern Panama (Mount Pirri).

<sup>1</sup> This form requires substantiation by a good series, and it is admitted here chiefly on account of its remote habitat.

<sup>2</sup> *Basileuterus melanogenys ignotus* Nelson: Nearest to the geographically remote *B. m. melanogenys*, but back and outer aspect of wings and tail of a brighter purer green (olive citrine rather than brownish olive); superciliaries straw yellow instead of white and meeting in a broad band across the forehead; sides of the head dull greenish finely mottled with dusky instead of uniform black, only the lores black; under parts straw yellow, palest on throat, the chest and sides shaded with buffy olive. Wing (female), 56; tail, 55.

After inspecting the type (and only known specimen) I see in this bird only a very well-marked race of the Black-cheeked Warbler.

**Basileuterus melanogenys bensoni** Griscom.<sup>1</sup> BENSON'S WARBLER.

*Basileuterus bensoni* Griscom, Amer. Mus. Nov., 280, p. 12, 1927—Chitrá, Veragua, Panama (type in the American Museum of Natural History, New York); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 80, 1929—Chitrá, Veragua (monog.).

*Range*.—Subtropical zone of western Panama (Chitrá, Veragua).

**Basileuterus melanogenys eximius** Nelson.<sup>2</sup> CHIRIQUÍ WARBLER.

*Basileuterus melanogenys eximius* Nelson, Smiths. Misc. Coll., 60, No. 3, p. 22, 1912—Boquete, Panama (type in U. S. National Museum); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 80, 1929—western Panama (monog.).

*Basileuterus melanogenys* (not of Baird) Salvin, Proc. Zool. Soc. Lond., 1870, p. 183—Volcan de Chiriquí; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 174, 1881—part, Panama (Volcan de Chiriquí); Sharpe, Cat. Bds. Brit. Mus., 10, p. 398, 1885—part, spec. a-d, Chiriquí; Bangs, Proc. New Engl. Zool. Cl., 3, p. 60, 1902—Boquete and Volcan de Chiriquí; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 751, 1902—part, Chiriquí (Volcan de Chiriquí, Boquete).

*Range*.—Subtropical zone of extreme western Panama (Chiriquí).

**\*Basileuterus melanogenys melanogenys** Baird. BLACK-CHEEKED WARBLER.

*Basileuterus melanogenys* Baird, Rev. Amer. Bds., 1, p. 248, May, 1865—Costa Rica, (?) San José<sup>3</sup> (type in U. S. National Museum); Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 95, 1868—"San José," Costa Rica; Frantz, Journ. Orn., 17, p. 294, 1869—Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 174, pl. 10, fig. 3, 1881—part, Costa Rica ("San José," Volcan de Irazú); Sharpe, Cat. Bds. Brit. Mus., 10, p. 398, 1885—part, spec. e, Irazú, Costa Rica; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—La Palma de San José; Cherrie, Proc. U. S. Nat. Mus., 14, p. 528, 1891—Costa Rica (descr. juv.); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 751, 1902—part, Costa Rica; Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 277, 1910—Coliblanco and Volcan de Turrialba; Carriker, Ann. Carnegie Mus., 6, p. 796, 1910—Costa Rica (Volcan de

<sup>1</sup> *Basileuterus melanogenys bensoni* Griscom: Agreeing in pattern with *B. m. eximius*, but upper parts darker and grayer, olivaceous black rather than dull brownish olive; under surface soiled white instead of buffy, the chest and sides shaded with deep gray instead of with olive; black lateral borders to chestnut crown less extensive. Wing, 60–61, (female) 57; tail, 56–57.

*Material examined*.—Veragua: Chitrá, 3.

<sup>2</sup> *Basileuterus melanogenys eximius* Nelson: Exceedingly close to *B. m. melanogenys*, but above slightly less olivaceous, and underneath paler buffy. Wing (males), 59–62; tail, 57–60.

*Material examined*.—Panama: Boquete, 5.

<sup>3</sup> The locality "San José" is obviously inaccurate.

Turrialba, El Copey, Las Vueltas, La Lagunaria de Dota, La Estrella de Cartago, Volcan de Irazú, Azahár de Cartago, Ujurrás de Térraba; habits).

*Basileuterus melanogenys melanogenys* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 81, 1929—Costa Rica (monog.).

**Range.**—Subtropical zone of Costa Rica.

10: Costa Rica (Coliblanco, 2; La Estrella de Cartago, 1; Volcan de Irazú, 5; Volcan de Turrialba, 2).

**\**Basileuterus belli belli* (Giraud). BELL'S WARBLER.**

*Muscicapa belli* Giraud, Descr. Sixteen New Spec. N. Amer. Bds., p. [15, pl. 4, fig. 2], 1841—"Texas," errore<sup>1</sup> (type in U. S. National Museum).

*Basileuterus chrysophrys* (ex Lichtenstein MS.) Bonaparte, Consp. Gen. Av., 1, (2), p. 314, end of 1850—Real Ariba, Mexico (type in Berlin Museum); Sclater, Proc. Zool. Soc. Lond., 25, p. 202, 1857—Jalapa, Vera Cruz (descr.).

*Basileuterus belli*(i) Sclater, Proc. Zool. Soc. Lond., 23, p. 65, 1855 (crit.); idem, l.c., 27, p. 374, 1859—Llano Verde and Totontepec, Oaxaca; idem, l.c., 1865, p. 283—"Texas" and Mexico (diag.); Sclater and Salvin, Ibis, 1860, p. 31—Coban, Guatemala; Baird, Rev. Amer. Bds., 1, p. 250, 1865—Mexico (Orizaba) and Guatemala (Coban); Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—temperate region of Vera Cruz; Boucard, Ann. Soc. Linn. Lyon, (n.s.), 25, p. 40, 1878—Guatemala [=Vera Paz] (spec. examined); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 174, 1881—part, Mexico and Guatemala (part, Coban); Sharpe, Cat. Bds. Brit. Mus., 10, p. 395, 1885—part, spec. a-e, 1, Mexico (near Mexico City, Jalapa, Llano Verde, Orizaba) and Coban, Guatemala; Nelson, Auk, 15, p. 159, 1898—Chilpancingo, Guerrero, and San Sebastian, Jalisco; Smith, Condor, 11, p. 61, 1909—Cuernavaca, Morelos (habits).

*Basileuterus belli belli* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 743, 1902—southeastern Mexico (monog., full bibliog.); Phillips, Auk, 28, p. 86, 1911—Tamaulipas (Montelunga, Rampahuila, Carricitos, Galindo); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 82, 1929—Mexico (monog., full bibliog.); Griscom, Bull. Amer. Mus. N. H., 64, p. 343, 1931—Coban, Guatemala.

*Basileuterus belli clarus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 745, 1902—near Chilpancingo, Guerrero (type in U. S. National Museum).

**Range.**—Southern Mexico, from Tamaulipas and Jalisco south to Guerrero and Oaxaca, and eastern Guatemala (Vera Paz).<sup>2</sup>

2: Mexico (unspecified, 2).

<sup>1</sup> Mount Orizaba, Vera Cruz, Mexico, suggested as type locality by Todd (Proc. U. S. Nat. Mus., 74, art. 7, p. 84, 1929).

<sup>2</sup> I agree with Mr. Todd that the slight average difference between specimens from western and eastern Mexico is too insignificant for the formal recognition of the race *clarus*. Two Coban skins appear to be inseparable from the general "run" of east Mexican birds.

Eighteen specimens examined.

**Basileuterus belli scitulus** Nelson.<sup>1</sup> GUATEMALAN WARBLER.

*Basileuterus belli scitulus* Nelson, Auk, 17, p. 268, 1900—Todos Santos, western Guatemala (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 744, 1902—Chiapas and Guatemala (excepting Coban); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 84, 1929—Guatemala and Chiapas (monog.); Griscom, Bull. Amer. Mus. N. H., 64, p. 344, 1931—western Guatemala (Nebaj, Tecpam, San Lucas).

*Basileuterus belli* (not *Muscicapa belli* Giraud) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 174, 1881—part, Guatemala (Volcan de Fuego); Sharpe, Cat. Bds. Brit. Mus., 10, p. 395, 1885—part, spec. f-k, m, Guatemala (Volcan de Fuego, Volcan de Agua, Dueñas).

*Range*.—Pacific Cordillera of Guatemala and adjacent parts of Chiapas, Mexico (San Cristóbal).

**\*Basileuterus rufifrons**<sup>2</sup> *rufifrons* (Swainson). RUFIOUS-CAPPED WARBLER.

*Setophaga rufifrons* Swainson, Anim. Menag., p. 294, Dec., 1837—Mexico<sup>3</sup> (location of type not stated, probably in University Museum, Cambridge, Engl.).

*Basileuterus rufifrons* Bonaparte, Consp. Gen. Av., 1, (2), p. 314, 1850—Mexico; Sclater, Proc. Zool. Soc. Lond., 24, p. 291, 1856—vicinity of Vera Cruz, Mexico; idem, l.c., 26, p. 299, 1858—La Parada, Oaxaca; Baird, Rev. Amer. Bds., 1, p. 248, 1865—part, Mirador and Jalapa, Vera Cruz; Sclater, Proc. Zool. Soc. Lond., 1865, p. 284—Mexico (diag.); Salvin, Ibis, 1866, p. 192—Dueñas, Guatemala; Sumichrast, Mem. Bost. Soc. N. H., 1, p. 546, 1869—temperate region of Vera Cruz; Lawrence, Bull. U. S. Nat. Mus., 4, p. 16, 1874—Guichicovi, Chiapas; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 175, 1881—part, Mexico (Apam, Real Ariba, Jalapa, Mirador, Orizaba, La Parada, Cinco Señores, Guichicovi); Sharpe, Cat. Bds. Brit. Mus., 10, p. 397, 1885—part, spec. a-i, Mexico (Jalapa, Cinco Señores) and Guatemala (Dueñas); Chapman, Bull. Amer. Mus. N. H., 10, p. 25, 1898—Jalapa, Mexico; Berlioz, Rev. Franç. d'Orn., 8, p. 159, 1923—Orizaba, Vera Cruz.

*Basileuterus rufifrons rufifrons* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 745, 1902—southeastern Mexico from Vera Cruz to Chiapas (monog.).

*Idiotes rufifrons rufifrons* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 91, 1929—southern Mexico and Guatemala (monog.); Griscom, Bull. Amer. Mus. N. H., 64, p. 345, 1932—northern Guatemala (Finca La Primavera, Chanquejelve, Panajachel).

<sup>1</sup> Judging from five west-Guatemalan specimens, *B. b. scitulus* seems to me rather an unsatisfactory race.

<sup>2</sup> While agreeing with Mr. Todd that *B. rufifrons* is specifically distinct from *B. delatirii* I do not see any practical advantage in the recognition of a genus *Idiotes* for its reception.

<sup>3</sup> Real Ariba, Vera Cruz, suggested as type locality by Todd (Proc. U. S. Nat. Mus., 74, art. 7, p. 92, in text, 1929).

*Basileuterus delatirii* (not of Bonaparte) Selater, Proc. Zool. Soc. Lond., 28, p. 250, 1860—Uvero, Vera Cruz, Mexico; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 176, 1881—Guatemala, Dueñas (part).

*Basileuterus rufifrons dugesi* (not of Ridgway) Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 131, 1907—Lake Atitlan, Guatemala (crit.).

*Range*.—Southeastern Mexico, from Puebla and central Vera Cruz to Oaxaca and Chiapas, and adjoining parts of Guatemala.<sup>1</sup>

4: Mexico (Jalapa, Vera Cruz, 1); Guatemala (Lake Atitlan, 3).

**\**Basileuterus rufifrons jouyi* Ridgway.<sup>2</sup> JOUY'S WARBLER.**

*Basileuterus rufifrons jouyi* Ridgway, Proc. U. S. Nat. Mus., 15, p. 119, 1892—Hacienda Angostura, San Luis Potosi, Mexico (type in U. S. National Museum); Jouy, l.c., 16, p. 777, 1893—part, Hacienda Angostura; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 746, 1902—eastern Mexico, in states of San Luis Potosi and northern Vera Cruz (monog.); Phillips, Auk, 28, p. 86, 1911—Tamaulipas (Galindo, Guiaves, Montelunga, Yerba Buena, Rampahuila, Santa Leonor, Rio Cruz).

*Idiotes rufifrons jouyi* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 93, 1929—eastern Mexico, from Tamaulipas to northern Puebla and northern Vera Cruz (monog.).

*Basileuterus rufifrons dugesi* (not of Ridgway, 1892) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 747, 1902—part, Puebla and Hidalgo.

*Range*.—Eastern Mexico, from Tamaulipas and San Luis Potosi south to Hidalgo, northern Puebla, and northern Vera Cruz.

2: Mexico (Sierra Madre, above Ciudad Victoria, Tamaulipas, 2).

**\**Basileuterus rufifrons dugesi* Ridgway.<sup>2</sup> DUGÈS'S WARBLER.**

*Basileuterus rufifrons dugesi* Ridgway, Proc. U. S. Nat. Mus., 15, p. 119, 1892—Guanajuato, Mexico (type in U. S. National Museum); idem, Bull. U. S. Nat. Mus., 50, Part 2, p. 747, 1902—part, Jalisco to Morelos and Guanajuato (monog.); Smith, Condor, 11, p. 61, 1909—Cuernavaca, Morelos.

*Idiotes rufifrons dugesi* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 94, 1929—Mexico from Jalisco to Oaxaca (monog.).

*Basileuterus rufifrons jouyi* (not of Ridgway) Jouy, Proc. U. S. Nat. Mus., 16, p. 777, 1893—part, Barranca Ibarra, Jalisco.

*Range*.—Western and central Mexico, from Jalisco and Nayarit south to Oaxaca.

5: Mexico (Tuxpan, Jalisco, 5).

<sup>1</sup> Guatemalan specimens seem to be inseparable from a Jalapa series.

<sup>2</sup> *Basileuterus rufifrons jouyi* and *B. r. dugesi* are both rather unsatisfactory races, their characters being recognizable only in series of newly molted specimens.

**Basileuterus rufifrons caudatus** Nelson.<sup>1</sup> NELSON'S WARBLER.

*Basileuterus rufifrons caudatus* Nelson, Proc. Biol. Soc. Wash., 13, p. 29, 1899—near Alamos, Sonora, Mexico (type in U. S. National Museum); Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 748, 1902—Sonora and Chihuahua (monog.); van Rossem, Trans. San Diego Soc. N. H., 6, p. 287, 1931—Guiricoba, Sonora.

*Basileuterus rufifrons* (not *Selophaga rufifrons* Swainson) Baird, Rev. Amer. Bds., 1, p. 248, 1865—part, Sierra Madre, near Mazatlan, Sinaloa; Lawrence, Mem. Bost. Soc. N. H., 2, p. 270, 1874—Sierra Madre, Sinaloa; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 175, 1881—part, Sierra Madre; Allen, Bull. Amer. Mus. N. H., 5, p. 41, 1893—Napolera, Chihuahua.

*Basileuterus rufifrons dugesi* (not of Ridgway, 1892) Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 747, 1902—part, Sinaloa (Plomosa and Sierra Madre).

*Idiotes rufifrons caudatus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 94, 1929—northwestern Mexico (monog.).

*Range*.—Northwestern Mexico, in states of Sonora, Chihuahua, and Sinaloa.

**Basileuterus (rufifrons?) salvini** (Cherrie).<sup>2</sup> SALVIN'S WARBLER.

*Basileuterus salvini* Cherrie, Proc. U. S. Nat. Mus., 14, p. 342, 1891—Coban, Vera Paz, Guatemala (type in U. S. National Museum); Salvin and Godman, Ibis, 1892, p. 326—Vera Paz, Guatemala, and Teapa, Tabasco (crit.).

*Basileuterus flavigaster* Nelson, Auk, 14, p. 67, 1897—Yajalon, Chiapas, Mexico (type in U. S. National Museum).

*Basileuterus flaviventris* Sharpe, Hand List Bds., 5, p. 126, 1909—substitute for *B. flavigaster* Nelson.

*Basileuterus delatirii* (not of Bonaparte) Sclater, Proc. Zool. Soc. Lond., 1865, p. 284—southern Mexico and Guatemala (part); Baird, Rev. Amer. Bds., 1, p. 249, 1865—Coban, Guatemala (crit.); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 176, 1881—part, Guatemala (Coban, Lanquin, Cahabón); Sharpe, Cat. Bds. Brit. Mus., 10, p. 396, 1885—part, spec. b, Coban, Guatemala.

<sup>1</sup>*Basileuterus rufifrons caudatus* Nelson is characterized by Todd as exceedingly close to *B. r. dugesi*, but still duller (near citrine drab) on the upper, and averaging paler on the lower parts. The supposedly longer tail turns out to be imaginary. We are not acquainted with this race.

<sup>2</sup>*Basileuterus (rufifrons?) salvini* (Cherrie): Very similar to *B. r. rufifrons*, but with the yellow of the breast more extended abnormally, often covering the entire belly, with a buffy wash on the flanks and crissum.

This much disputed yellow-bellied bird, though superficially resembling *B. delatirii*, seems to be a representative form of *B. rufifrons*. Mr. Griscom recently even pleaded its specific distinctness, basing it on the fact of *B. r. rufifrons* having likewise been met with in the Coban district of Guatemala. With only one specimen at hand, we are not in a position to throw any light on the problem, though the occurrence of a third "species" in Guatemala would seem to be extremely unlikely, and we would recommend the subject for further investigation.

*Basileuterus rufifrons* (not *Setophaga rufifrons* Swainson) Sharpe, Cat. Bds. Brit. Mus., 10, p. 397, 1885—part, spec. k-m, Guatemala (Coban, Cahabón).

*Basileuterus rufifrons salvini* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 749, 1902—Guatemala (Coban, Vera Paz); Stone, Proc. Acad. Nat. Sci. Phila., 84, p. 334, 1932—Cantarranas and San Juancito, Honduras.

*Basileuterus rufifrons flavigaster* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 748, 1902—southeastern Mexico, in states of Vera Cruz, Tabasco, and Chiapas, and in Guatemala (monog.).

*Idiotes rufifrons salvini* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 89, 1929—southeastern Mexico to Vera Paz, Guatemala (monog.).

*Idiotes salvini* Griscom, Bull. Amer. Mus. N. H., 64, p. 344, 1932—Guatemala (Finca Sepacuite, Secanquim, Chimoxan, and Finca Concepción, Alta Vera Paz; Nebaj, Quiché; crit.).

**Range.**—Southeastern Mexico, from southern Vera Cruz (San Andres Tuxtla) through Tabasco (Teapa) and Chiapas (Yajalon) to northern Guatemala (depts. of Quiché and Alta Vera Paz) and Honduras (Cantarranas and San Juancito).

**\**Basileuterus delatirii delatirii* Bonaparte. DELATTRE'S  
WARBLER.**

*Basileuterus delatirii* Bonaparte, Compt. Rend. Acad. Sci. Paris, 38, p. 383, 1854—Nicaragua (location of type unknown<sup>1</sup>); idem, Not. Orn. Coll. Delattre, p. 62, 1854 (reprint); Sclater and Salvin, Ibis, 1860, p. 274—Dueñas, Guatemala; Sclater, Proc. Zool. Soc. Lond., 1865, p. 284—Guatemala (part); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 176, 1881—part, Guatemala (Dueñas, Volcan de Fuego, Volcan de Agua) and Nicaragua; Sharpe, Cat. Bds. Brit. Mus., 10, p. 396, 1885—part, spec. a, c-e, Guatemala (Calderas, La Trinidad, Volcan de Agua); Cherrie, Proc. U. S. Nat. Mus., 14, p. 340, 1891—Costa Rica (crit.); idem, l.c., 14, p. 527, 1891—San José, Costa Rica (descr. young); idem, Auk, 9, p. 22, 1892—San José (nest and eggs); Salvin and Godman, Ibis, 1892, p. 326—Nicaragua (Matagalpa, Chinandega) and Guatemala (Dueñas, Volcan de Fuego) (crit.).

*Basileuterus delatirii* Cabanis, Journ. Orn., 8, p. 325, 1860—Costa Rica (crit.); Lantz, Trans. Kansas Acad. Sci., 16, p. 223, 1899—near Granada, Nicaragua.

*Basileuterus mesochrysus* (not of Sclater) Baird, Rev. Amer. Bds., 1, p. 251, 1862—part, San José, Costa Rica; Lawrence, Ann. Lyc. Nat. Hist. N. Y., 9, p. 95, 1868—Costa Rica (San José, Grecia, Guastil); Frantzius, Journ. Orn., 17, p. 294, 1869—San José, Costa Rica; Boucard, Proc. Zool. Soc. Lond., 1878, p. 52—San José and Cartago, Costa Rica; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 176, 1881—part, Costa Rica (San José, Guastil, Grecia, Irazú); Ridgway, Proc. U. S. Nat. Mus., 5, p. 499, 1883—San José; Sharpe, Cat. Bds. Brit. Mus., 10, p. 396, 1885—part, spec. a-c, Costa Rica (Grecia, Irazú); Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Costa Rica (San José, Alajuela, Naránjo de Cartago,

<sup>1</sup> M. Berlioz informs me that it is not in the collection of the Paris Museum.



Grecia, Monte Redondo); Underwood, Ibis, 1896, p. 434—Miravalles, Costa Rica.

*Basileuterus rufifrons delatirii* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 749, 1902—Nicaragua and Costa Rica (monog.); Dearborn, Field Mus. Nat. Hist., Orn. Ser., 1, p. 131, 1907—Patulul and Lake Amatitlan, Guatemala (crit.); Bangs, Proc. Biol. Soc. Wash., 22, p. 36, 1909—Tenorio and Cerro Santa Maria, Costa Rica (crit.); Ferry, Field Mus. Nat. Hist., Orn. Ser., 1, p. 277, 1910—Guayábo, Costa Rica; Carriker, Ann. Carnegie Mus., 6, p. 798, 1910—highlands of Costa Rica (habits, vertical range).

*Basileuterus delatirii delatirii* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 87, 1929—southern Guatemala and Costa Rica (monog.); Griscom, Bull. Amer. Mus. N. H., 64, p. 344, 1932—San Lucas, western Guatemala.

**Range.**—Western Guatemala (San Lucas, Dueñas, Volcan de Fuego, Volcan de Agua), western Nicaragua (Matagalpa, Chinandega, etc.), and highlands of Costa Rica (except the Térraba Valley).

24: Guatemala (Lake Amatitlan, 2; Patulul, Sololá, 7); Costa Rica (Cartago, 2; Guayábo, 9; San José, 2; Santa Cruz de Turrialba, 1; unspecified, 1).

**\**Basileuterus delatirii mesochrysus* Sclater. SCLATER'S  
WARBLER.**

*Basileuterus mesochrysus* Sclater, Proc. Zool. Soc. Lond., 28, p. 251 (in text), 1860—"Bogotá," Colombia (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 35, 1862—"New Granada"; Baird, Rev. Amer. Bds., 1, p. 250, 1865—part, "Bogotá"; Sclater, Proc. Zool. Soc. Lond., 1865, p. 184—"Nova Granada" (diag.); Salvin, l.c., 1867, p. 136—Santa Fé, Veragua; idem, l.c., 1870, p. 183—Chitrá and Calobre, Veragua; Wyatt, Ibis, 1871, p. 323—Herradura and Cocuta Valley, Colombia; Salvin and Godman, Ibis, 1879, p. 198—Manaure, Colombia (crit.); idem, Ibis, 1880, p. 117—Chirua, Colombia; idem, Biol. Centr.-Amer., Aves, 1, p. 176, 1881—part, Panama (Volcan de Chiriquí, Chitrá, Calobre, Santa Fé, line of railway, Paraiso Station) and Colombia (Santa Marta, "Bogotá"); Berlepsch, Journ. Orn., 32, p. 282, 1884—Bucaramanga, Colombia (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 396, 1885—part, spec. d-o, Veragua (Calobre, Chitrá, Santa Fé), Panama (Chiriquí, Paraiso), Colombia ("Bogotá," Alto, Magdalena Valley; Manaure); Bangs, Proc. Biol. Soc. Wash., 12, pp. 144, 180, 1898—"Santa Marta" and Palomina, Colombia; Allen, Bull. Amer. Mus. N. H., 13, p. 176, 1900—Bonda, Minca, and Cacagualito, Colombia.

*Basileuterus brunneiceps* (not *Setophaga brunneiceps* Lafresnaye and d'Orbigny) Bonaparte, Consp. Gen. Av., 1, (2), p. 314, end of 1850—"Santa Fé de Bogotá."

*Basileuterus delatirii* (not of Bonaparte) Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—"Bogotá," Colombia (crit.); Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 136, 1893—Boruca, Costa Rica.

*Basileuterus delattrei* Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 322, 1861—Panama Railroad.

*Basileuterus rufifrons delattrei* Bangs, Auk, 24, p. 306, 1907—Boruca and Paso Real, Costa Rica.

*Basileuterus delattrei mesochrysus* Cherrie, Proc. U. S. Nat. Mus., 14, p. 342, 1891—Colombia (crit.); Todd and Carriker, Ann. Carnegie Mus., 14, p. 439, 1922—Bonda, Minca, Cacagualito, Mamatoco, Agua Dulce, Cincinnati, La Tigrera, and Pueblo Viejo, Santa Marta region, Colombia (crit., habits); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 85, 1929—southwestern Costa Rica to Colombia (monog.); Darlington, Bull. Mus. Comp. Zool., 71, p. 411, 1931—Quebrada Mateo, near Rio Frio, Magdalena, Colombia.

*Basileuterus rufifrons mesochrysus* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 750, 1902—Colombia to Panama (monog.); Thayer and Bangs, Bull. Mus. Comp. Zool., 46, p. 221, 1906—savanna of Panama; Bangs, Proc. Biol. Soc. Wash., 22, p. 36, 1909—Buenos Aires and El General, southwestern Costa Rica (crit.); Carriker, Ann. Carnegie Mus., 6, p. 797, 1910—southwestern Costa Rica (Boruca, Buenos Aires, Paso Real, El General); Chapman, Bull. Amer. Mus. N. H., 36, p. 553, 1917—Colombia (near Honda, Chicoral, below Andalucia); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 274, 1918—Gatun and Pedro Miguel, Panama; Hallinan, Auk, 41, p. 324, 1924—Rio Algarrobo, Sosa Hill, and Farfan, Panama (food).

*Range*.—Tropical zone of southwestern Costa Rica (Térraba Valley), Panama, and Colombia (Santa Marta region and Magdalena Valley).<sup>1</sup>

7: Costa Rica (Boruca, 2; Buenos Aires, 1); Panama (Colón, 1); Colombia (Andalucia, Huila, 2; "Bogotá," 1).

### ***Basileuterus cinereicollis*<sup>2</sup> *cinereicollis* Sclater. GRAY-THROATED WARBLER.**

*Basileuterus cinereicollis* Sclater, Proc. Zool. Soc. Lond., 1864, p. 166—"Bogotá," Colombia (type in coll. of P. L. Sclater, now in British Museum, examined); idem, l.c., 1865, p. 285, pl. 9, fig. 2—"Nova Grenada" (crit.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 382, 1885—Bogotá (descr.); Berlepsch and Leverkühn, Ornith., 6, p. 7, 1890—Bogotá (crit.); Chapman, Bull. Amer. Mus. N. H., 36, p. 550, 1917—Buena Vista, above Villavicencio,

<sup>1</sup> Specimens from the Térraba Valley (Costa Rica) and Panama appear to be identical with a series of "Bogotá" skins.

*Additional material examined*.—Panama: Chiriquí, 3.—Colombia: "Bogotá," 12.

<sup>2</sup> *Basileuterus cinereicollis*, while nearly allied to *B. coronatus*, differs rather markedly from that species by much less extensive, mainly lemon chrome coronal area with less sharply defined blackish lateral stripes, by lacking the blackish transocular streak, and by some minor details. It may be merely a strongly marked race, but its distribution is so imperfectly known that further speculation as to its relationship seems futile. While both *B. c. cinereicollis* and *B. coronatus regulus* inhabit the eastern Andes of Colombia, they have yet to be taken in the same localities.

*Material examined*.—Colombia: "Bogotá," 5; La Palmita, Santander, 4; Rio Negro, Boyacá, 4; Buena Vista, above Villavicencio, 3.

eastern Colombia (crit.); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 38, 1929—eastern Andes of Colombia (monog.).

*Range*.—Subtropical zone of the eastern Andes of Colombia, in states of Santander (La Palmita; Pueblo Nuevo), Boyacá (Rio Negro), and Cundinamarca (Buena Vista, above Villavicencio).

***Basileuterus cinereicollis conspicillatus* Salvin and Godman.<sup>1</sup>  
SANTA MARTA GRAY-THROATED WARBLER.**

*Basileuterus conspicillatus* Salvin and Godman, Ibis, (4), 4, p. 117, 1880—San José, Santa Marta Mountains, Colombia (cotypes in Salvin-Godman Collection, now in British Museum, examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 389, 1885—San José; Todd and Carriker, Ann. Carnegie Mus., 14, p. 441, 1922—Chirua, La Concepción, San Miguel, Las Nubes, Valparaiso, Cincinnati, San Lorenzo, Las Taguas, Sierra Nevada de Santa Marta, Las Vegas, Minca, and Pueblo Viejo, Colombia (crit., habits); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 39, 1929—Santa Marta region (monog.).

*Basileuterus cinereicollis* (not of Sclater) Bangs, Proc. Biol. Soc. Wash., 12, pp. 160, 180, 1898—Pueblo Viejo, San Francisco, and Palomina; Allen, Bull. Amer. Mus. N. H., 13, pp. 120, 175, 1900—Las Nubes, Onaca, Valparaiso, and El Libano (crit.).

*Range*.—Subtropical zone of the Santa Marta Mountains in northern Colombia.

**\**Basileuterus coronatus regulus* Todd.<sup>2</sup> NORTHERN ORANGE-CROWNED WARBLER.**

*Basileuterus coronatus regulus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 36, 1929—Páramo de Rosas, State of Lara, Venezuela (type in Carnegie Museum, Pittsburgh).

<sup>1</sup>*Basileuterus cinereicollis conspicillatus* Salvin and Godman: Similar to *B. c. cinereicollis*, but with decidedly smaller bill; coronal patch generally more orange (near mars yellow) with the blackish lateral stripes more extended posteriorly; the back, wings, and tail externally brighter, light olive green rather than olive citrine; supraloral streak more pronounced and white instead of gray; lower eyelid white; the gray color underneath confined to the throat, not carried on to the chest; under wing coverts whitish instead of greenish. Wing, 63–69, (female) 60–63; tail, 56–62; bill, 12.

I do not understand how the late R. B. Sharpe (Hand List Bds., 5, p. 123, 1909) could ever credit me with the statement that *B. conspicillatus* and *B. cinereicollis* were the same. As early as 1906 I had compared a series from Santa Marta with the material of *B. cinereicollis* in the British Museum, and duly noted the differences between the two races, the memorandum made at that time being still in my possession.

*Material examined*.—Colombia, Santa Marta region: San José, 2 (the cotypes); Valparaiso, 5; Onaca, 1; Las Nubes, 2.

<sup>2</sup>*Basileuterus coronatus regulus* Todd: Similar to *B. c. coronatus*, but median coronal stripe paler, mars yellow rather than orange rufous, and upper parts slightly more greenish, less tinged with brownish.

*Additional material examined*.—Venezuela: Sierra of Mérida (Mérida, El Valle, Escorial, etc.), 10.—Colombia: "Bogotá," 12; Santa Elena, 3; Santo Antonio, 6.

*Basileuterus coronatus* (not *Myiodioides coronatus* Tschudi) Sclater, Proc. Zool. Soc. Lond., 23, p. 144, 1855—"Bogotá," Colombia; idem, Cat. Coll. Amer. Bds., p. 34, 1862—part, spec. b, "Bogotá"; Baird, Rev. Amer. Bds., 1, p. 244, 1865—part, "Bogotá"; Sclater, Proc. Zool. Soc. Lond., 1865, p. 284—part, "Nova Granada"; Sclater and Salvin, l.c., 1875, p. 234—Mérida, Venezuela; idem, l.c., 1879, p. 494—Santa Elena, Antioquia, Colombia (nest and eggs descr.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 390, 1885—part, spec. a-g, "Bogotá," Medellín, Santa Elena, and Antioquia; Chapman, Bull. Amer. Mus. N. H., 36, p. 552, 1917—San Antonio, Las Lomitas, Cerro Munchique, Miraflores, Salento, Laguneta, Santa Elena, El Eden, Almaguer, La Candela, Subia, Fusugasugá, and El Roble, Colombia.

**Range.**—Subtropical zone of the Andes of Colombia (except eastern slope and northern part of the eastern Andes and Santa Marta Mountains) and western Venezuela (from Tachira to Trujillo and Lara).

9: Colombia ("Bogotá," 3; Laguneta, west Quindio Andes, Cauca, 1; Rio Zapata, 1); Venezuela (Andes of Mérida, Nevados, 1; Rio Mucujón, 1; Tabay, Mérida, 2).

### ***Basileuterus coronatus elatus* Todd.<sup>1</sup> ECUADORIAN ORANGE-CROWNED WARBLER.**

*Basileuterus coronatus elatus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 35, 1929—Pagma Forest, Hacienda Jalancay, near Chunchi, western Ecuador (type in coll. of the Academy of Natural Sciences, Philadelphia).

*Basileuterus coronatus* (not *Myiodioides coronatus* Tschudi) Sclater, Proc. Zool. Soc. Lond., 27, p. 137, 1859—Pallatanga, Ecuador; idem, Cat. Coll. Amer. Bds., p. 34, 1862—part, spec. a, Pallatanga; Baird, Rev. Amer. Bds., 1, p. 244, 1865—part, Ecuador; Sclater, Proc. Zool. Soc. Lond., 1865, p. 284—part, Ecuador; Berlepsch and Taczanowski, l.c., 1884, p. 286—Cayanded, Tribulpata, and Cechce (crit.); Stolzmann, l.c., 1885, p. 423 (range); Sharpe, Cat. Bds. Brit. Mus., 10, p. 390, 1885—part, spec. h-l, "Jima" and Pallatanga, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1899—Nanegal and Niebli; Goodfellow, Ibis, 1901, p. 314—Milligalli and Canzacota, Ecuador; Ménégau, Miss. Serv. Géog. Armée Mes. Arc Mérid. Equat., 9, p. B. 73, 1911—Nono and "Quito"; Lönnberg and Rendahl, Ark. Zool., 14, No. 25, p. 78, 1922—road to Nanegal, Ecuador; Chapman, Bull. Amer. Mus. N. H., 55, p. 601, 1926—Huigra, Pagma Forest, Verdecocha, road to Nanegal, and Pallatanga,

<sup>1</sup>*Basileuterus coronatus elatus* Todd: Similar to *B. c. coronatus*, but somewhat smaller; upper parts generally more brownish in tone; throat paler gray; flanks and under tail coverts washed with olive ochre rather than greenish; lateral black crown stripes narrower, not meeting in front, and orange rufous coronal patch correspondingly larger. Wing (adult males), 66-70; tail, 55-59; bill, 11-12.

**Material examined.**—Western Ecuador: Govinda, 1; Cayanded, 2; Pallatanga, 1; above Gualea, 1; Nanegal, 1; Niebli, 3; Milligalli, 5; Canzacota, 2; "Quito," 3.

Ecuador; Berlioz, Bull. Mus. Hist. Nat., Paris, 34, p. 73, 1928—Pilon and Aluguincho, Ecuador.

*Range*.—Subtropical zone of western Ecuador south to the Rio Chimbo.

**\**Basileuterus coronatus coronatus* (Tschudi). ORANGE-CROWNED WARBLER.**

*Myiodiodes coronatus* Tschudi, Arch. Naturg., 10, (1), p. 283, 1844—Peru (type in Neuchâtel Museum examined); idem, Unters. Faun. Peru., Aves, p. 193, pl. 14, fig. 1, 1846—forests of the Chanchamayo Valley, Dept. Junín (cf. l.c., p. 194, in text of *M. tristriatus*).

*Basileuterus coronatus* Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Paltaypampa and Auquimarca, Dept. Junín, Peru; idem, l.c., 1882, p. 6—Cocochó, Ray-urmana, Chachapoyas, and Tamiapampa; idem, Orn. Pér., 1, p. 476, 1884—Peruvian localities (descr.); Sharpe, Cat. Bds. Brit. Mus., 10, p. 390, 1885—part, spec. m, Auquimarca; Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—Garita del Sol, Dept. Junín; idem, Ornith., 13, pp. 75, 107, 1906—Idma (Urubamba) and Huaynapata (Marcapata); Chapman, Bull. U. S. Nat. Mus., 117, p. 107, 1921—Idma, San Miguel Bridge, and near Torontoy, Urubamba.

*Basileuterus coronatus coronatus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 33, 1929—Peru (monog.); Zimmer, Field Mus. Nat. Hist., Zool. Ser., 17, p. 428, 1930—Chinchao, Dept. Huánuco.

*Basileuterus coronatus elatus* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 35, 1929—part, northern Peru.

*Range*.—Subtropical zone of Peru, from the eastern Cordillera (both slopes) in depts. of Amazonas and San Martín south to the Bolivian boundary.<sup>1</sup>

4: Peru (Chinchao, 1; Molinopampa, 1; Uchco, 2).

***Basileuterus coronatus notius* Todd.<sup>2</sup> BOLIVIAN ORANGE-CROWNED WARBLER.**

<sup>1</sup> Birds from various parts of Peru, while subject to some individual variation, appear to me to pertain to one and the same form. The type, although slightly faded through long exposure to light, agrees in size and coloration with specimens from Junín (Utcuyacu, Chelpes). Certain individuals from northeastern Peru, in some details, resemble the west-Ecuadorian race (*B. c. elatus*), to which they have actually been referred by Mr. Todd, but taken as a whole the inhabitants of that region seem to be nearer to typical *coronatus*, inasmuch as other examples are practically indistinguishable from Junín birds, while not one is exactly like the Ecuadorian form. Specimens from extreme southeastern Peru (San Miguel, Urubamba; Huaynapata), by more purely olive green upper parts, closely approach *B. c. notius*, but they are larger and of a clearer yellow below. Very similar examples occur, however, in other parts of Peru.

*Additional material examined*.—Cocochó, 1; Tamiapampa, 1; Chachapoyas, 2; Ray-urmana, 2; La Lejia, north of Chachapoyas, 2; Garita del Sol, Vitoc, 1; Utcuyacu, 6; Chelpes, 4; Idma, Urubamba, 3; San Miguel Bridge, Urubamba, 3; Huaynapata, 3; unspecified, 1 (the type).

<sup>2</sup> *Basileuterus coronatus notius* Todd: Similar to *B. c. coronatus*, but somewhat smaller; upper parts more purely olive green; under surface duller yellow,

*Basileuterus coronatus notius* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 33, 1929—Yungas of Cochabamba, Bolivia (type in the Carnegie Museum).

**Range.**—Subtropical zone of the eastern slope of the Andes of Bolivia (Yungas of Cochabamba).

***Basileuterus castaneiceps*<sup>1</sup> *castaneiceps* Sclater and Salvin.  
CHESTNUT-CROWNED WARBLER.**

*Basileuterus castaneiceps* Sclater and Salvin, Proc. Zool. Soc. Lond., 1877, p. 521—"Jima, on the head-waters of the Rio Santiago, not very far from Cuenca," Ecuador (type in Salvin-Godman Collection, now in the British Museum); Sharpe, Cat. Bds. Brit. Mus., 10, p. 389, 1885—part, spec. b, c, Sical and Jima.

*Basileuterus castaneiceps castaneiceps* Chapman, Bull. Amer. Mus. N. H., 55, p. 600, 1926—southwestern Ecuador (El Chiral, Zaruma, Taraguacocha, Loja) and northwestern Peru (El Tambo, Palambla); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 30, 1929 (monog.).

**Range.**—Subtropical zone of southwestern Ecuador (in provinces of El Oro and Loja) and adjacent parts of northwestern Peru (El Tambo and Palambla, eastern section of Dept. Piura).<sup>2</sup>

***Basileuterus castaneiceps orientalis* Chapman.<sup>3</sup> EASTERN CHESTNUT-CROWNED WARBLER.**

*Basileuterus castaneiceps orientalis* Chapman, Amer. Mus. Nov., 143, p. 8, 1924—upper slopes of Mount Sumaco, head of Rio Suno, eastern Ecuador (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 601, 1926—Puente del Rio Quixos, lower Rio Sardinias, Oyacachi, and Macas region; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 31, 1929—eastern Ecuador (monog.).

more shaded with olivaceous (pyrite yellow) on breast and sides. Wing, 67–69, (female) 60–64; tail, 59–60, (female) 54–56; bill, 11–12.

**Material examined.**—Bolivia: Quebrada Onda, 5.

<sup>1</sup>*Basileuterus castaneiceps* is probably conspecific with *B. coronatus*, such relationship being suggested by the intermediate characters of *B. castaneiceps orientalis*. The two groups seem to replace each other geographically. *B. coronatus elatus* inhabits western Ecuador north of the Rio Chimbo, while south of that line *B. c. castaneiceps* is found. In Peru, the upper Marañón Valley apparently separates the ranges of *B. castaneiceps chapmani* and *B. coronatus coronatus*, the former occupying the eastern slope of the western Cordillera, the latter the western slope of the central Cordillera, whereas *B. castaneiceps castaneiceps* extends down to the western side of the western Cordillera.

<sup>2</sup> Birds from Palambla are identical with others from Ecuador.

**Material examined.**—Ecuador: Jima, 1; Govinda, 1; El Chiral, 3; Loja, 2.—Peru: Palambla, Piura, 4.

<sup>3</sup>*Basileuterus castaneiceps orientalis* Chapman: Similar to *B. c. castaneiceps*, but upper parts decidedly brighter, more greenish (between dark citrine and olive green); under surface anteriorly more grayish, abdomen and flanks more strongly washed or edged with yellowish; crissum more decidedly yellow; size on average larger. Wing (male), 70–74; tail, 62–65.

**Material examined.**—Eastern Ecuador: San Rafael, 1; Machay, 1; Baeza, 3.

*Basileuterus castaneiceps* (not of Sclater and Salvin) Taczanowski and Berlepsch, Proc. Zool. Soc. Lond., 1885, p. 74—Machay and San Rafael; Goodfellow, Ibis, 1901, p. 315—Baeza.

*Range*.—Subtropical zone of eastern Ecuador.

***Basileuterus castaneiceps chapmani* Todd.<sup>1</sup> CHAPMAN'S CHEST-NUT-CROWNED WARBLER.**

*Basileuterus castaneiceps chapmani* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 32, 1929—Chaupe, east side of western Cordillera, northern Peru (type in the American Museum of Natural History, New York).

*Basileuterus castaneiceps* (not of Sclater and Salvin) Taczanowski, Proc. Zool. Soc. Lond., 1879, p. 223—Tambillo; idem, Orn. Pér., 1, p. 474, 1884—Cutervo and Tambillo; Stolzmann, Proc. Zool. Soc. Lond., 1885, p. 423 (range).

*Range*.—Subtropical zone of the eastern slope of the western Cordillera in northern Peru (Chaupe, Cutervo, Tambillo).

**\**Basileuterus fraseri fraseri* Sclater. FRASER'S WARBLER.**

*Basileuterus fraseri* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—part, Chimbo, Ecuador (nomen nudum, ex Sclater, MS.); Sclater, Proc. Zool. Soc. Lond., 1883, p. 653, pl. 61—part (type from Pallatanga, Ecuador, in coll. of P. L. Sclater, now in British Museum); Berlepsch and Taczanowski, l.c., 1884, p. 286—Pedregal, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 394, 1885—part, spec. b, Pallatanga; Hartert, Nov. Zool., 5, p. 480, 1898—Chimbo.

*Basileuterus fraseri fraseri* Chapman, Bull. Amer. Mus. N. H., 55, p. 602, 1926—Ecuador (Chimbo, Rios Coco and Chimbo, Rio Jubones, La Puente, La Chonta, Santa Rosa, El Chiral, Portovelo, Zaruma, Salvias, Punta Santa Ana, Las Piñas, Guainche, Cebollal, Lumamá, Alamor, Pulango) and Peru (Milagros, Paletillas, Palambila); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 40, 1929 (monog.).

*Basileuterus chrysogaster* (not *Setophaga chrysogaster* Tschudi) Sclater, Proc. Zool. Soc. Lond., 27, p. 137, 1859—Pallatanga; idem, Cat. Coll. Amer. Bds., p. 35, 1862—part, spec. a, Pallatanga; idem, Proc. Zool. Soc. Lond., 1865, p. 284—part, Ecuador (in part).

*Range*.—Peru (eastern section of Piura) and southwestern Ecuador, in Subtropical zone; Tropical zone from Santa Rosa northward.

2: Ecuador (Puente de Chimbo, 2).

<sup>1</sup>*Basileuterus castaneiceps chapmani* Todd: Nearest to *B. c. castaneiceps*, but above much darker and browner (medal bronze) with the central coronal stripe slightly darker, and chest more tinged with grayish. Wing, 70–72, (female) 63–64; tail, 60–61, (female) 57–58.

This form approaches the typical race in having hardly any yellow on the abdomen, but is much browner on the upper parts and more grayish on the chest. Its range appears to be restricted to the eastern slope of the western Cordillera of northern Peru, while on the opposite side of the same chain beyond Huanca-bamba Pass, at Palambila and El Tambo, typical *B. c. castaneiceps* takes its place.

*Material examined*.—Peru: Tambillo, 3; Chaupe, 1.

**Basileuterus fraseri ochraceicrista** Chapman.<sup>1</sup> OCHREOUS-CRESTED WARBLER.

*Basileuterus fraseri ochraceicrista* Chapman, Amer. Mus. Nov., 18, p. 11, 1921—Chone, Manaví, Ecuador (type in the American Museum of Natural History, New York); idem, Bull. Amer. Mus. N. H., 55, p. 602, 1926—Chone, Chongocito, Chongon Hills, Guayaquil, Chimbo, Rios Coco and Chimbo, and Naránjo, Ecuador; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 42, 1929 (monog.); Berlioz, Bull. Mus. Hist. Nat. Paris, (2), 4, p. 235, 1932—Isla Silva, Rio Babahoyo.

*Basileuterus chrysogaster* (not *Setophaga chrysogaster* Tschudi) Sclater, Proc. Zool. Soc. Lond., 28, p. 273, 1860—Babahoyo; idem, Cat. Coll. Amer. Bds., p. 35, 1862—part, spec. b, Babahoyo; idem, Proc. Zool. Soc. Lond., 1865, p. 284—part, Ecuador (in part).

*Basileuterus fraseri* Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—part, Guayaquil (nomen nudum, ex Sclater, MS.); Sclater, l.c., 1883, p. 653—part, Babahoyo; Sharpe, Cat. Bds. Brit. Mus., 10, p. 394, 1885—part, spec. a, c-e, Babahoyo, Santa Rita, and Balzar; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1900—Vinces, Ecuador (spec. examined).

*Range*.—Arid Tropical zone of southwestern Ecuador, from Manaví to Guayaquil and Puna Island.

**\*Basileuterus rivularis mesoleucus** Sclater.<sup>2</sup> DEMERARA WARBLER.

*Basileuterus mesoleucus* Sclater, Proc. Zool. Soc. Lond., 1865, p. 286, pl. 9, fig. 1—Demerara, British Guiana (type in coll. of P. L. Sclater, now in British Museum); Salvin, Ibis, 1885, p. 203—Camacusa, British Guiana; Sharpe, Cat. Bds. Brit. Mus., 10, p. 402, 1885—Guiana (Demerara, Camacusa); Berlepsch and Hartert, Nov. Zool., 9, p. 11, 1902—Suapure, Caura River, Venezuela; Ménégau, Bull. Mus. Hist. Nat. Paris, 13, p. 496, 1907—French Guiana (crit.); Berlepsch, Nov. Zool., 15, p. 108, 1908—Approuague and Ipousin, French Guiana (spec. examined); Penard and Penard, Vog. Guyana, 2, p. 489, 1910—British Guiana; Snethlage,

<sup>1</sup>*Basileuterus fraseri ochraceicrista* Chapman: Very similar to *B. f. fraseri*, but vertical spot ochraceous orange or mars orange instead of bright lemon chrome. Seven specimens from Guayaquil, Vinces, Chongon Hills, and Chone, when compared with ten typical *fraseri*, are distinguishable by the coloration of the crown. Complete intergradation takes place in the Chimbo Valley.

<sup>2</sup>*Basileuterus rivularis mesoleucus* Sclater: Closely similar to *B. r. rivularis*, but superciliaries and lower eyelid much deeper in color, ochraceous tawny rather than pinkish buff; auricular region tinged with ochraceous tawny; white area below more extensive and less buffy; flanks more brownish. Wing, 61–64, (female) 58–62; tail, 55–58, (female) 54–56; bill, 11–12.

In various individuals the feathers of the forehead are marked with small basal spots of whitish or buff, much as in *B. r. rivularis*.

*Additional material examined*.—Venezuela: Suapure, Caura River, 1.—British Guiana: Caramang River, 3.—French Guiana: Ipousin, 1; Approuague River, 2; Saint Jean du Maroni, 1; unspecified, 1.—Brazil, Pará: Pará, 1; Santo Antonio do Prata, 1.



Bol. Mus. Goeldi, 8, p. 483, 1914—Pará, Peixe-Boi, and Santo Antonio do Prata, Pará, Brazil; Cherrie, Sci. Bull., Mus. Brookl. Inst., 2, p. 153, 1916—Suapure, Caura River; Chubb, Bds. Brit. Guiana, 2, p. 418, 1921—Ituribisci, Supenaam, Kamakabra Creek, and Camacusa; Snethlage, Bol. Mus. Nac. Rio de Janeiro, 2, No. 6, p. 59, 1926—Tury-assú, Maranhão; Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 22, 1929 (monog.).

*Basileuterus rivularis mesoleucus* Hellmayr, Abhandl. Bayr. Akad. Wiss., Math.-Phys. Kl., 26, No. 2, p. 86, 1912—Santo Antonio do Prata, Pará; Stone, Proc. Acad. Nat. Sci. Phila., 80, p. 173, 1928—Rio Muraiteua, Pará; Hellmayr, Field Mus. Nat. Hist., Zool. Ser., 12, p. 259, 1929—Tury-assú, Maranhão.

*Range*.—Northeastern Venezuela from the Orinoco Delta (Manimo River) to the Caura River (Suapure); British and French Guiana; northeastern Brazil, on the Rio Branco and south of the Amazon from northern Maranhão (Tury-assú) west to the Rio Tapajóz (Colonia do Mojuy, Villa Braga).

3: Brazil, Rio Branco (Conceição, 1; Serra Grande, 1; Serra da Lua, near Bôa Vista, 1).

**\**Basileuterus rivularis rivularis* (Wied). BUFF-BREASTED WARBLER.**

*Muscicapa rivularis* Wied, Reise Bras., 2, p. 103, 1821—Villa d'Ilhéos, Bahia, Brazil (type now in the American Museum of Natural History, New York; cf. Allen, Bull. Amer. Mus. N. H., 2, p. 215, 1889); idem, Beitr. Naturg. Bras., 3, (2), p. 789, 1831—Rios Belmonte and Ilhéos, southern Bahia.

*Muscicapa stragulata* Lichtenstein, Verz. Doubl. Berliner Mus., p. 55, 1823—São Paulo (type in Berlin Museum).

*Geothlypis stragulata* Cabanis, Mus. Hein., 1, p. 17, 1851—Bahia; Euler, Journ. Orn., 16, p. 191, 1868—Cantagallo (nest and eggs descr.); Cabanis, l.c., 22, p. 82, 1874—Cantagallo.

*Trichas stragulata* Burmeister, Syst. Uebers. Th. Bras., 3, p. 115, 1856—São Paulo (descr.).

*Basileuterus stragulatus* Sclater, Cat. Coll. Amer. Bds., p. 35, 1862—Brazil; Baird, Rev. Amer. Bds., 1, pp. 243, 244, 1865 (diag.); Sclater, Proc. Zool. Soc. Lond., 1865, p. 285—Brazil (diag.); Pelzel, Orn. Bras., 2, p. 72, 1868—Rio de Janeiro (Registre do Sai), São Paulo (Taipa, Ypanema, Rio Paraná), and Paraná (Paranaguá, Curytiba) (spec. examined); Reinhardt, Vidensk. Medd. Naturhist. Foren., 1870, p. 444—Nova Friburgo, Rio de Janeiro; Berlepsch, Journ. Orn., 21, p. 232, 1873—Blumenau, Santa Catharina (crit.; spec. examined); Sharpe, Cat. Bds. Brit. Mus., 10, p. 401, 1885—São Paulo and Rio Grande do Sul (Lagôa dos Patos); Ihering, Ann. Est. Rio Grande do Sul, 16, p. 117, 1899—Lagôa dos Patos; idem, Rev. Mus. Paul., 3, p. 135, 1899—Iguapé, São Paulo; Euler, l.c., 4, p. 14, 1900 (nest and eggs descr.); Ihering, l.c., 4, p. 152, 1900—Cantagallo and Nova Friburgo; idem, Cat. Faun. Braz., 1, p. 334, 1907—São Paulo (Iguapé, Baurú, Alto da Serra, Ubatuba, Itararé) and

Paraná (Ourinho); Bertoni, Anal. Soc. Cient. Arg., 75, p. 97, 1913—Iguazú, Misiones; idem, Faun. Parag., p. 60, 1914—Paraguay (Puerto Bertoni) and Misiones (Rio Iguazú).

*Basileuterus strangulatus* (sic) Bertoni, Rev. Inst. Parag., 1907 [Sep., p. 2]—Paraguay (Puerto Bertoni, Mondafh, Iguazú).

*Siphia obscura* Sharpe, Proc. Zool. Soc. Lond., 1881, p. 789—"Borneo," errore (type in British Museum); cf. Lowe, Bull. Brit. Orn. Cl., 41, p. 35, 1920 (crit.).

*Basileuterus mesoleucus leucophrys* (not of Pelzeln) Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 185, 1926—Paraná (Salto de Uba, Salto das Bananeiras, Salto Guayra, Porto Mendes).

*Basileuterus mesoleucus guayrae* Sztolcman, Ann. Zool. Mus. Pol. Hist. Nat., 5, p. 186, 1926—Salto Guayra, Paraná (type in Warsaw Museum).

*Basileuterus rivularis* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 24, 1929 (monog.).

**Range.**—Wooded region of southeastern Brazil, from southern Bahia (Rio Cachoeira [= Ilhéos] and Rio Belmonte) south to Santa Catharina and northern Rio Grande do Sul (Lagôa dos Patos), and the adjacent districts of Misiones (Rio Iguazú), and Paraguay (Puerto Bertoni).<sup>1</sup>

1: Brazil (Fazenda Cayoá, Salto Grande do Rio Paranapanema, São Paulo, 1).

### ***Basileuterus rivularis bolivianus* Sharpe.<sup>2</sup> BOLIVIAN WARBLER.**

*Basileuterus bolivianus* Sharpe, Cat. Bds. Brit. Mus., 10, p. 402, 1885—Yuyo, Dept. La Paz, Bolivia (type in British Museum examined); Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 23, 1929—Juntas, Tres Arroyas (Rio Espirito Santo), Rio Surutú, Rio Yapacani, Cerro del Ambero, Cerro Hosane, Vermejo, and Santa Cruz, Bolivia (monog.).

<sup>1</sup> There does not seem to be any local variation in this form. The few topotypical Bahia skins before us, while rather dark on chest and sides, can be exactly matched by others from more southern localities. The late J. Sztolcman inconceivably referred a series from Paraná to *B. leucophrys*, but noticing several striking discrepancies between his birds and Pelzeln's description tentatively proposed for them the name *B. m. guayrae* without mentioning *B. rivularis*, with which his alleged novelty is obviously identical.

**Additional material examined.**—Brazil: Bahia, 3; Registre do Sai, Rio de Janeiro, 2; Taipa, São Paulo, 1; Ypanema, São Paulo, 2; Itararé, São Paulo, 1; Porto do Rio Paraná, São Paulo, 1; Victoria do Botucatú, São Paulo, 1; Curytiba, Paraná, 1; Paranaguá, Paraná, 1; Blumenau, Santa Catharina, 1.

<sup>2</sup> *Basileuterus rivularis bolivianus* Sharpe: Very nearly related to *B. r. rivularis*, but pileum uniform neutral gray without white basal spots on the forehead and blackish lateral crown stripes; superciliaries narrower and more decidedly buffy; no distinct dusky patch in the upper auricular region, etc. Wing, 66–69, (female) 64; tail, 55–57, (female) 52; bill, 11–12.

The type differs from the other specimens examined by more rufescent throat, but its poor state of preservation is prohibitive of final conclusion as to the significance of this slight variation.

**Material examined.**—Bolivia: Yuyo, 1 (the type); Juntas, 2; San Mateo, 1.

*Basileuterus mesoleucus* (not of Sclater) Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 594—Yuyo, Bolivia (crit.).

**Range.**—Eastern foothills of Bolivia, in depts. of La Paz, Cochabamba, Santa Cruz, and Tarija.

**\**Basileuterus fulvicauda fulvicauda* (Spix). FULVOUS-RUMPED WARBLER.**

*Muscicapa fulvicauda* Spix, Av. Spec. Nov. Bras., 2, p. 20, pl. 28, fig. 2, 1825—no locality given; São Paulo de Olivença, Rio Solimões, Brazil, suggested by Todd (Proc. U. S. Nat. Mus., 74, art. 7, p. 18, 1929) as type locality (type in Munich Museum examined).

*Basileuterus uropygialis* Sclater, Proc. Zool. Soc. Lond., 1861, p. 128—"Brazil" (type in coll. of P. L. Sclater, now in British Museum); idem, Cat. Coll. Amer. Bds., p. 35, 1862—Brazil; idem, Proc. Zool. Soc. Lond., 1865, p. 286, pl. 10, fig. 2—part (excl. hab. Panama); Sclater and Salvin, l.c., 1867, pp. 749, 754—Chyavetas, Peru; idem, l.c., 1873, p. 257—Chyavetas and Santa Cruz, Peru; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 173, (in text), 1881—Ecuador (Sarayacu), Peru (Chyavetas), and Colombia ("Bogotá"); Taczanowski, Proc. Zool. Soc. Lond., 1874, p. 509—Monterico and Amable Maria, Peru; idem, l.c., 1882, p. 6—Huambo, Peru; idem, Orn. Pér., 1, p. 478, 1884—Peru (Chyavetas, Santa Cruz, Monterico, Amable Maria, Huambo); Sharpe, Cat. Bds. Brit. Mus., 10, p. 405, 1885—part, spec. a-e, h, i, Ecuador (Sarayacu), "Bogotá," and Peru (Santa Cruz, Chyavetas); Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331 (crit. note on type); Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1899—Rio Zamora, Ecuador (crit.).

*Basileuterus uropygialis poliothrix* Berlepsch and Stolzmann, Proc. Zool. Soc. Lond., 1896, p. 331—La Gloria and La Merced, Chanchamayo, Dept. Junín, Peru (type, from La Gloria, in Berlepsch Collection, now in Frankfort Museum, examined).

*Basileuterus fulvicauda* Hellmayr, Abhandl. Bayr. Akad. Wiss., II. Kl., 22, No. 3, p. 652, 1906 (crit.).

*Basileuterus fulvicauda semicervinus* (not of Sclater) Hellmayr, Nov. Zool., 17, p. 265, 1910—Calama, Rio Madeira (crit.).

*Basileuterus fulvicauda fulvicauda* Hellmayr, Arch. Naturg., 85, A, Heft 10, p. 7, 1920—Yahuarimayo, Peru (crit.).

*Basileuterus fulvicaudus fulvicaudus* Chapman, Bull. Amer. Mus. N. H., 55, p. 603, 1926—Zamora, Rio Suno, and below San José, eastern Ecuador (crit.).

*Phaeothlypis fulvicauda fulvicauda* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 17, 1929—eastern Ecuador and eastern Peru east to the Rio Madeira (monog.).

*Phaeothlypis fulvicauda poliothrix* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 16, 1929—southern Peru (monog.).

**Range.**—Tropical zone of eastern Peru (in the northern section east of the central Cordillera) and eastern Ecuador (and probably

southeastern Colombia), east through western Brazil, south of the Rio Solimões, to the Rio Madeira (Calama).<sup>1</sup>

4: Peru (Moyobamba, 3; Yurimaguas, 1).

***Basileuterus fulvicauda annexus* (Todd).<sup>2</sup> MARAÑÓN FULVOUS-RUMPED WARBLER.**

*Phaeothlypis semicervina annexa* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 15, 1929—Pomará, lower Marañón, Peru (type in the American Museum of Natural History, New York).

*Range*.—Tropical zone of the Marañón Valley in northern Peru.

**\**Basileuterus fulvicauda semicervinus* Sclater. FAWN-BELLIED WARBLER.**

*Basileuterus semicervinus* Sclater, Proc. Zool. Soc. Lond., 28, p. 84, 1860—Nanegal, western Ecuador (types in coll. of P. L. Sclater, now in British Museum); idem, l.c., 28, p. 291, 1860—Esmeraldas, Ecuador; idem, Cat. Coll. Amer. Bds., p. 35, 1862—Nanegal; idem, Proc. Zool. Soc. Lond., 1865, p. 286, pl. 10, fig. 1—Ecuador (diag.); Baird, Rev. Amer. Bds., 1, pp. 243, 244, 1865—Ecuador (ex Sclater); Sclater and Salvin, Proc. Zool. Soc. Lond., 1879, p. 494—Remedios and Neche, Antioquia, Colombia; Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 173 (in text), 1881—Colombia and western Ecuador (crit.); Berlepsch and Taczanowski, Proc. Zool. Soc. Lond., 1883, p. 541—Chimbo, Ecuador; Berlepsch, Journ. Orn., 32, p. 284, 1884—Bucaramanga, Colombia; Sharpe, Cat. Bds. Brit. Mus., 10, p. 404, 1885—Ecuador ("Quito"), Santa Rita, Nanegal and Colombia ("Bogotá"); Hartert, Nov. Zool., 5, p. 480, 1898—Cachaví, Ecuador; Salvadori and Festa, Boll. Mus. Zool. Torino, 14, No. 357, p. 9, 1899—Rio Peripa, Ecuador; Goodfellow, Ibis, 1901, p. 314—Nanegal, Ecuador.

<sup>1</sup> Although Mr. Todd has recently endorsed its validity, I am unable to discover any constant character whereby to separate the supposed southern race *poliothrix*, individual variation being unusually great. Of two topotypes from the Chanchamayo Valley, only one (the type) has the basal part of the tail and the upper tail coverts a slight shade paler buffy and the back faintly more olivaceous than specimens from eastern Ecuador and Brazil, whereas the second example is much more deeply colored on the rump as well as on the under parts, thereby closely approaching certain individuals of *B. f. semicervinus*. There is, of course, the possibility that birds from Chanchamayo and the adjacent districts may be inter-grades to *B. f. annexus*, and that a slightly differentiated form has developed in southeastern Peru, whose inhabitants appear to be more constant in their characters. It is well to note, however, that an adult from Calama, Rio Madeira, can hardly be distinguished from the dark-colored Chanchamayo bird, suggesting the individual rather than geographic nature of the variation.

*Additional material examined*.—Ecuador: Sarayacu, 3; Rio Zamora, 1.—Brazil: São Paulo de Olivença, 2; Hyutanahan, Rio Purús, 5; Calama, Rio Madeira, 1; unspecified, 1 (the type).—Peru: Huambo, 1; Santa Cruz, 1; Chanchamayo, 2; Yahuarimayo, 1; Rio Tavara, 2.

<sup>2</sup> *Basileuterus fulvicauda annexus* (Todd): Very similar to *B. f. semicervinus*, but apical portion of tail more olivaceous, and under parts less strongly suffused with buffy, thus verging to *B. f. fulvicauda*.

*Material examined*.—Peru: Pomará, 2.

*Basileuterus uropygialis* (not of Sclater) Taczanowski, Proc. Zool. Soc. Lond., 1877, p. 331—Palmar, Ecuador; Sharpe, Cat. Bds. Brit. Mus., 10, p. 405, 1885—part, spec. f, g, Remedios, Colombia.

*Basileuterus fulvicauda semicervinus* Hellmayr, Proc. Zool. Soc. Lond., 1911, p. 1092—Juntas (Rio Dagua) and Rio Garrapatas (Sipi), Colombia; Chapman, Bull. Amer. Mus. N. H., 36, p. 553, 1917—Alto Bonito, Bagado, Juntas de Tamaná, Nóvita, San José, Barbacoas, Ricaurte, Puerto Valdivia, and Peque, Colombia; Griscom, Bull. Mus. Comp. Zool., 69, p. 183, 1929—Cana, Darien, Panama.

*Basileuterus fulvicauda fulvicauda* (not *Muscicapa fulvicauda* Spix) Chapman, Bull. Amer. Mus. N. H., 36, p. 553, 1917—Chicoral, Magdalena Valley, Colombia (crit.).

*Basileuterus fulvicaudus semicervinus* Chapman, Bull. Amer. Mus. N. H., 55, p. 603, 1926—Esmeraldas, Cuaque El Destino, Bucay, Rio de Oro, Chimbo, La Chonta, and Cebollal, Ecuador.

*Phaeothlypis semicervina semicervina* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 13, 1929—eastern Panama to Ecuador (monog.); Griscom, Bull. Mus. Comp. Zool., 72, p. 368, 1932—Obaldia, eastern Panama.

**Range.**—Tropical zone of eastern Panama (Darien) and south through Colombia (east to the Magdalena Valley) to western Ecuador.<sup>1</sup>

5: Colombia (Quibdó, Atrato River, 1; Alto Bonito, Antioquia, 1; San José de Buenaventura, 1; "Bogotá," 2).

**\**Basileuterus fulvicauda veraguensis* Sharpe.<sup>2</sup> VERAGUAN BUFF-RUMPED WARBLER.**

*Basileuterus veraguensis* Sharpe, Cat. Bds. Brit. Mus., 10, p. 403, 1885—Paraiso Station, Panama Railroad, Panama (type in British Museum); Cherrie, Anal. Inst. Fis.-Geog. Mus. Nac. Costa Rica, 4, p. 136, 1893—Boruca and Buenos Aires, Costa Rica; idem, l.c., 6, p. 12, 1895—Rio Naránjo, Costa Rica (crit., habits).

<sup>1</sup> Birds from Colombia, including a number of Bogotá skins, appear to me inseparable from Ecuadorian specimens, and I do not see how a Magdalena Valley form can be separated, if those from Bogotá are representative of it. Specimens from Darien, eastern Panama, which we have not seen, are stated by Todd to be typical of *semicervinus*.

**Additional material examined.**—Colombia: Rio Garrapatas (Sipi), 1; Juntas, Rio Dagua, 6; Jiménez, 2; "Bogotá," 10.—Ecuador: Cachabí, 1; San Javier, 9; Pambilár, 2; Paramba, 9; Bulún, 1; Lita, 1; Nanegal, 2; Chimbo, 1.

<sup>2</sup> This is rather a variable form connecting the Central American *leucopygius* with *semicervinus*. Certain individuals without brownish mottling underneath look much like the South American race, though they still differ by more brownish (less olivaceous) back and less decidedly buffy sides of the head. Such specimens, which are not rare along the Panama Railroad line, have given rise to reports of *semicervinus* occurring in that district, and have even induced Mr. Griscom to redescribe the present form as *B. f. toddi*.

**Additional material examined.**—Panama: Capira, 1; Panama Railroad (Lion Hill), 3.—Chiriquí: El Banco, 1; Boquete, 3.—Costa Rica (Boruca, Buenos Aires), 14.

*Basileuterus uropygialis* (not of Sclater) Sclater and Salvin, Proc. Zool. Soc. Lond., 1864, p. 347—Lion Hill, Panama Railroad (crit.); Baird, Rev. Amer. Bds., 1, p. 246, 1865—Panama Railroad (crit.); Sclater, Proc. Zool. Soc. Lond., 1865, p. 286—part, Panama; Salvin, l.c., 1867, p. 136—Santa Fé, Veragua; idem, l.c., 1870, p. 183—Bugaba, Chiriquí.

*Basileuterus semicervinus* (not of Sclater) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 7, p. 322, 1861—Panama Railroad (crit.).

*Basileuterus leucopygius* (not of Sclater and Salvin) Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 172, 1881—part, Panama (Bugaba, Santa Fé, Panama Railroad).

*Basileuterus leucopygius veraguensis* Bangs, Auk, 18, p. 368, 1901—Divala, Chiriquí; idem, Proc. New Engl. Zool. Cl., 3, p. 60, 1902—Boquete, Chiriquí.

*Basileuterus semicervinus veraguensis* Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 756, 1902—Panama to southwestern Costa Rica (monog.); Bangs, Auk, 24, p. 306, 1907—Boruca and Paso Real, Costa Rica (crit.); Carriker, Ann. Carnegie Mus., 6, p. 794, 1910—El General, Buenos Aires, de Terraba, Pózo Azul de Pirrís, Paso Real, and Boruca, Costa Rica (crit.); Stone, Proc. Acad. Nat. Sci. Phila., 70, p. 274, 1918—Rio Siri, Panama.

*Basileuterus fulvicauda toddi* Griscom, Amer. Mus. Nov., 280, p. 14, 1927—Boquerón, Pacific slope of Chiriquí, Panama (type in the American Museum of Natural History, New York).

*Phaeothlypis leucopygia veraguensis* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 11, 1929—Panama to southwestern Costa Rica (monog.).

**Range.**—Tropical zone of Panama, from the Canal Zone westward on the Pacific slope to southwestern Costa Rica (north to the Pirrís Valley).

4: Panama (El Banco, Chiriquí, 1); Costa Rica (Boruca, 3).

**\**Basileuterus fulvicauda leucopygia* (Sclater and Salvin). BUFF-RUMPED WARBLER.**

*Basileuterus leucopygius* Sclater and Salvin, Nomencl. Av. Neotrop., p. 156, 1873—Costa Rica (type in coll. of P. L. Sclater, now in British Museum); Salvin and Godman, Biol. Centr.-Amer., Aves, 1, p. 172, 1881—part, Nicaragua (Greytown) and Costa Rica (Tucurriquí, Angostura, Tuís); Nutting, Proc. U. S. Nat. Mus., 6, p. 399, 1884—Los Sábalos, Nicaragua (habits); Sharpe, Cat. Bds. Brit. Mus., 10, p. 402, 1885—Tucurriquí, Costa Rica; Zeledón, Anal. Mus. Nac. Costa Rica, 1, p. 107, 1887—Angostura and Tuís, Costa Rica; Ridgway, Proc. U. S. Nat. Mus., 10, p. 585, 1888—Segovia River, Honduras; Richmond, l.c., 16, p. 485, 1893—Rio Frio, Nicaragua (habits); Underwood, Ibis, 1896, p. 434—Miravalles, Costa Rica.

*Basileuterus uropygialis* (not of Sclater) Lawrence, Ann. Lyc. Nat. Hist. N. Y., 8, p. 180, 1866—Greytown, Nicaragua; idem, l.c., 9, p. 95, 1868—Angostura and Tuís, Costa Rica; Frantz, Journ. Orn., 17, p. 294, 1869—Costa Rica; Salvin, Ibis, 1872, p. 313—Nicaragua; Boucard, Proc. Zool. Soc. Lond., 1878, p. 52—San José, Costa Rica.

*Basileuterus semicervinus leucopygius* Nutting, Proc. U. S. Nat. Mus., 5, p. 390, 1882—La Palma, Gulf of Nicoya, Costa Rica; Ridgway, Bull. U. S. Nat. Mus., 50, Part 2, p. 757, 1902—Costa Rica to Honduras (monog.); Carriker, Ann. Carnegie Mus., 6, p. 793, 1910—Carrillo, Reventazón, La Vijagua, Cariblanco de Sarapiquí, Tenorio, Guápiles, Guácimo, and El Hogar, Costa Rica (habits); Rendahl, Ark. Zool., 12, No. 8, p. 36, 1919—Squirres, Costa Rica.

(?) *Basileuterus fulvicauda gaffneyi* Griscom, Amer. Mus. Nov., 280, p. 14, 1927—Guaval, Rio Calovévora, Caribbean slope of Veragua, Panama (type in the American Museum of Natural History, New York).

*Phaeothlypis leucopygia leucopygia* Todd, Proc. U. S. Nat. Mus., 74, art. 7, p. 9, 1929—Honduras to western Panama (monog.); Peters, Bull. Mus. Comp. Zool., 71, p. 337, 1931—Western River and Guabo, Almirante Bay, Panama; Huber, Proc. Acad. Nat. Sci. Phila., 84, p. 240, 1932—Lone Star Falls, near Eden, Nicaragua.

*Range*.—Tropical zone from southern Honduras (Segovia River) to Costa Rica (except southwestern section) and (?) thence eastward along the Caribbean slope to western Panama (Veragua).<sup>1</sup>

7: Costa Rica (Miravalles, 1; Turrialba, 1; Squirres, 1; Peralta, 1; La Iberia, Province of Limón, 3).

<sup>1</sup> The three specimens from the Rio Calovévora, Veragua, forming the basis of *B. f. gaffneyi*, have the chest and flanks more heavily washed with dusky, the tone of these markings being at the same time dark grayish olive rather than brownish; but in view of the great individual variation observable in *leucopygius* and *veraguensis* more material is needed for sustaining its claims to recognition.

Fifteen specimens from Costa Rica and three from Veragua (Rio Calovévora) have been examined.

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**Bold-faced type denotes names adopted in this work.**

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